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LATER NEWS.

THIS portion of THE CHEMIST AND DRUGGIST having gone to press a day earlier than usual, any news of importance received on Thursday will be found in the Coloured Supplement.



FOR FORMULE of good specialties see p. 185.

THE death of Mr. Edwin Edden is reported (p. 143).

CINCHONA PROSPECTS are further discussed on p. 162.

MR. E. S. PROCTOR has retired from business (p. 222).

THE CLOVE-MARKET is a bit excited this week (p. 215).

CONFERENCE ARRANGEMENTS are briefly forecast on p. 138.

"THE Tale of a Tea-tabloid" is an amusing piece of "frivol" (p. 187).

LOVERS OF LATIN and apprentices will find a good exercise on p. 159.

IF YOU WANT TO KNOW how they dispense medicines in French hospitals read pp. 188-9.

CONSOLATION for some who have had bad quarters of an hour in the drug-trade—see p. 158.

"BUDS AND STIPULES" is the subject of an address by Sir John Lubbock, reported on p. 141.

THE CHEMISTR AND PHARMACY of "sweet nitre" are discussed, with illustrations, on p. 184.

"THE BITTERING OF BEER" is the briefest summary we can make of the article on pp. 179-180.

KIPLING is responsible for "Galen Duplex" to the extent of originating the rhythm (p. 151).

AN INTERESTING ACTION regarding a geranium-oil transaction has been heard in Bombay (p. 142).

DID the chemists' vote return Mr. Campbell for St. Stephen's Green division of Dublin? See p. 139.

OIL OF SPIKE-LAVENDEE requires close watching. Mr. J. C. Umney finds adulterated oil in the market (p. 186).

A MAN who refused to pay 1,800% on account of Homoea shares has been ordered by the Court to pay up (p. 142).

PORTRAITS AND SKETCHES of the careers of twelve men of mark are a feature of this number. The series begins on p. 171.

THE IRISH PHARMACEUTICAL COUNCIL is shown in session on p. 169, and a brief history of the Society begins on p. 166.

IF THE PRIVY COUNCIL need any more evidence as to juries' opinions on carbolic acid, they will find it in two cases given on p. 136.

THE latest things we can gather in novelties for retailers are described on p. 152, and by "Our Town Traveller" (p. 211).

PARTICULARS of the amalgamation of about twenty Ulster drug-shops and pharmacies are given on p. 138. We comment upon it on p. 163.

MR. SCOTCHEM, A.P.S., who recently started in Slocum, and did not get on until he cut prices, has been brought to book by the chemists of the town (p. 186).

FOR those who appreciate philosophic thinking we print Mr. David Storrar's address on pharmaceutical ethics. A portrait of Mr. Storrar accompanies it (p. 207).

IT IS ALWAYS INTERESTING to know how it is done in France. The illustrated article beginning on p. 203 shows how the purity of food and drugs is maintained there.

THE Chemical Society's home in Piccadilly is pictured on pp. 141-145; last week's meeting is reported on p. 146; and we comment upon the proposed revision of the constitution on p. 161.

A LARGE SECTION of this issue is devoted to a directory of limited companies connected with the drug-trade. The nominal and subscribed capital is stated in almost every case. The directory begins on p. 190.



Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

The Imperial Institute.

The authorities of the Imperial Institute have written to the Lord Mayor asking that accommodation may be provided in the Guildhall Library for them to arrange and maintain a commercial and industrial newsroom and to open a small branch office of the commercial, industrial, and intelligence department of the Imperial Institute. The letter will be laid before the Common Council at its next meeting.

Will the Privy Council Attend to this?

At Southampton on January 24, in returning a verdict of death from carbolic-acid poisoning at an inquest on the body of a woman, the jury considered that greater care should be taken by those who retail this acid, and that this opinion should be communicated to the Pharmaceutical Society.

At an inquest held on January 20, at Rhuddlan, by Mr. Llewellyn Jones, respecting the death of an artist named Borrell, who poisoned himself by means of carbolic acid taken in mistake, the Coroner remarked that deceased must have mistaken the bottle containing the poison for another bottle exactly alike containing something else. He added that he felt it his duty to say that it was a very serious thing that oilmen and others should be permitted to sell carbolic acid in the way they did to all comers, and especially as it was often supplied in a common bottle that could easily be mistaken for something else. He had held three inquests lately in which death was due to carbolic-acid poisoning. He hoped that the jury would add to their verdict a rider condemning the selling of carbolic acid in the unrestricted manner so prevalent to-day. The jury adopted this suggestion.

The Preservative Properties of Carbolic Acid.

At an inquest before the Manchester Coroner on January 24, touching the death of Fred. Wolstenholme, a fish-salesman, it transpired that on January 7 the deceased went to Mr. Flint's chemist's shop, and purchased twopennyworth of carbolic acid, and one pennyworth of chloride of lime, and was never seen alive afterwards. The body was not discovered until early on Saturday morning last in a field near Broom Hall, Blakely. The carbolic acid had preserved the body from decomposition, although death had evidently taken place on January 7. Dr. Hislop's hands were burnt by the fluid when he was making a *post-mortem* examination. Mr. Flint said deceased talked in his usual way when purchasing the drugs. He had once complained of sleeplessness, and witness gave him bromide of potassium, but it had no effect upon him. The jury returned a verdict of suicide whilst insane.

The Late Mr. Conroy.

The funeral of the late Mr. Michael Conroy, F.C.S., took place last Saturday at Wallasey Cemetery. Prior to interment a Requiem Mass was sung at SS. Peter and Paul's Catholic Church, New Brighton. Amongst those present, in addition to the immediate relatives, were Messrs John J. Evans, J.P., C.C., Edward Evans, jun., J.P., William P. Evans, J. N. Evans, Everett Evans, and, as a deputation of Messrs. Evans, Sons & Co.'s staff, Messrs. John E. Parker, W. Wellings, S. Coyle, J. Loble, J. Murphy, T. Watson, W. H. Nall, J. Park, and J. Jones. Also Messrs. J. Shacklady (Liverpool Pharmaceutical Students' Association), T. H. Wardleworth (Secretary Liverpool Chemists' Association), J. Bain (President Liverpool Chemists' Association), Ed. Davies, F.C.S.,

C. Symes, Ph.D., J. T. Hornblower, and many other professional and business friends. We may add to the particulars given last week that Mr. Conroy was born in county Armagh in 1844. In his ninth year his parents removed to Gibraltar, where he received the groundwork of his education, which included a thorough knowledge of Latin and Spanish. At the age of 14 he returned to England, and was shortly afterwards apprenticed to a cabinet-maker, but not liking his master he left him, and managed to obtain a situation with a chemist and druggist. At the age of 18 he entered the employment of Messrs. Clay, Dod & Co., of Liverpool, and worked for four years in the tincture-department, spending his spare time at all the available lectures on science-subjects. He entered Messrs. Evans, Sons & Co.'s employment in 1866, and from that time his progress in pharmacy was steadily upward. He became a member of the Liverpool Chemists' Association, and filled, with great credit to himself, the positions of Secretary, Vice-President, President, and contributed many valuable and practicable papers to its meetings. In speaking of his younger days Mr. Conroy frequently referred to the valuable assistance he received from Mr. E. A. Webb, F.L.S., while he was devoting attention to the study of botany. He never took a prominent part in public affairs, and was not a keen politician. Until about six or seven months ago he was looked upon as a robust man, but shortness of breath of a distressing character manifested itself; then a consultation with a physician revealed the unexpected and startling fact that his heart was affected, and though every effort was made to avert the final result, and hopes were frequently raised by short rallies, a serious collapse took place last week, and he died on the evening of Wednesday, January 19. Mr. Conroy leaves a widow, two sons, and a daughter to mourn his loss. His son Mr. James T. Conroy is at present engaged in research-work in the laboratories of the United Alkali Company, under Dr. Hurter, and promises to perpetuate the character of his father for sound and practical work.

Alcoholic Temperance Drinks.

At Wellingborough, on January 21, H. Spakes, Bozeat, was summoned for selling ginger-wine without a licence. Mr. Helpin, analytical chemist, Somerset House, stated the sample of wine analysed contained $5\frac{4}{10}$ per cent. of proof spirit, and compared with ordinary public-house beer it was two-thirds to three-fourths stronger. The spirit was produced by fermentation. The Bench imposed a fine of 1*l.* and costs.

At Amptill, on January 20, A. Brown was similarly proceeded against. In this case herb-beer was purchased, and certified by the Somerset House analyst to contain $6\frac{1}{2}$ per cent. of proof spirit. The Bench did not think the law had been broken intentionally, and dismissed the case.

Thefts by Boys.

Two schoolboys, named Mayes and Kelby, were charged at Leicester, on January 24, with stealing six bottles of scent, value 3*s.* 9*d.*, the property of Mr. Sydney White, chemist and druggist. Bertram Ward, Prosecutor's apprentice, stated that he had charge of Mr. White's stall at the "World's Fair" on January 14, and when he locked it up on January 13 there were sixty-two bottles of scent in stock. On opening the stall next day he found six bottles missing, and also discovered a hole in the side of the stall. Detective Sergeant Coleman said he found the boys offering the bottles of scent for sale at 1*s.* 6*d.* a bottle. When questioned the lads stated that they had bought the scent, but subsequently admitted stealing it. The Bench decided to deal with the defendants under the First Offenders Act, and bound them over in the sum of 5*l.* each for three months, to come up for judgment if called upon.

An errand boy, who had been employed by Mr. A. Haynes, chemist, Stockbrook Street, Derby, for a fortnight, was caught stealing 6*s.* 6*d.* from the till. Before the Magistrates, Mr. Haynes said, whilst not pressing the charge, he had had so many dishonest errand-lads that he felt bound to take action for his own protection. The boy was discharged with a caution.

At Derby on January 20, H. Wright, a boy of twelve years, was charged with stealing the sum of 2*s.* from Mr. P.

Allcock, chemist, 158 Brook Street. Defendant was employed as errand-boy, and on the evening of January 14 15s. in silver was placed on a shelf behind the counter. In the morning this and a sovereign placed in the same position were both missing, and when the lad was spoken to he produced 21s. 6d. The policeman who made the arrest said the boy admitted taking 24s. The lad was discharged with a caution, the prosecutor not pressing the charge.

Coroner's Advice to a Chemist.

At an inquest, at Battersea, on January 21, on the body of a man who had committed suicide by taking laudanum, Mr. W. Heale, chemist and druggist, 193 Battersea Park Road, gave evidence, and said he had no recollection of selling the laudanum. It was not a scheduled poison, and was not, therefore, entered in the poison-book, and he did not think he would have served the poison in a spirit-bottle. Mr. Braxton Hicks, the Coroner, advised him never to put laudanum in a bottle having the appearance of a spirit-bottle, but always in a blue fluted poison-bottle.

A Fertilisers and Feeding-stuffs Bill for Jersey.

The author of the Jersey Pharmacy Act, Dr. Walter Duret Aubin, has introduced into the local States, or Legislative Assembly, a Bill on the lines of the English "Fertilisers and Feeding-stuffs Act."

A Drunken Customer.

A drunken woman entered the pharmacy of Mr. F. G. Piquet, Halkett Place, Jersey, last week, and created a disturbance, Mr. Piquet promptly telephoned to the police-station, and madame was arrested. She was brought before the Magistrate the following morning, and sentenced to one month's imprisonment, with hard labour, as a public nuisance.

Risks of Prescribing.

At an inquest at Ipswich, on January 21, on a child of 2½ years, in which a medical man had refused a certificate, as medicine obtained from a general dealer in the neighbourhood had been previously administered, the father of the child said he had procured two bottles of the mixture, at 6d. a bottle, from Mrs. Norton, a general dealer. He was out of work, and unable to afford a doctor. It came out in evidence that the mixture consisted of salt of tartar and honey, which Mrs. Norton used for her own children, and occasionally sold. The Coroner, in summing up, said that anyone who prescribed for her Majesty's subjects incurred great responsibilities, and it was fortunate for the vendor of the mixture that the medical witness, although stating that it had a depressing effect, could not say positively it had accelerated death. To the jury's verdict of death from natural causes, a rider was added condemning the practice of indiscriminate prescribing of medicine by unqualified persons.

Sale of Chemical-works.

The Eagle Chemical-works in Chatham Street, Clayton, a leasehold property covering an area of 7.825 square yards, together with machinery, and subject to yearly rents amounting to 57l. 4s 8d., was sold for 1,800l. at a sale in Manchester on January 18.

Athletic Chemists.

The Metropolitan College of Pharmacy Football Club met the Kensington Rangers Reserves at Southfields on January 22, and defeated them by 2 goals to nil.

The Secretary of Stevenson & Howell's C.C. (95A South-wark Street, S.E.) asks us to state that he is open to book matches for next season. The club play on a private ground at Brockley.

The Earlier Closing of Shops.

The Board of Management of the Early Closing Association have issued a circular as a result of the Home Office deputation in support of the Shops (Early Closing) Bill. The Board feel that the Home Office reception shows how desirable it is that shopkeepers should everywhere consider the advisability of returning to Parliament candidates pledged to give their interests specific consideration. They suggest that shopkeepers' associations should enter into an alliance for parliamentary and municipal action, and they are willing

to bring them into unison for:—(a) Securing the return of candidates pledged to support the Early Closing Bill; (b) establishing a Central Chamber for the trade associations of the kingdom. It is proposed that each association pay an affiliation-fee of 1l. 1s., and have power to send a representative to Council meetings. They also hope that associations will reiterate their approval of the Shops (Early Closing) Bill, and transmit resolutions to the Secretary (Mr. J. A. Stacey), 21 New Bridge Street, E.C.

Christmas-day Incident.

On January 22 an inquest was held at Beer Ferrers, near Plymouth, touching the death of Peter Sullivan, whose body was washed ashore at Hake Stacks Creek. A seaman of H.M.S. *Vivid* said the deceased was late of H.M.S. *Sirius*, and had twice jumped overboard on Christmas Day, the second time striking himself against one of the cutters, and not rising again. In his pocket was found a purse containing money, and a piece of paper labelled "Jan Mocke, chemist, Union Street, Cape Town." The inquiry was adjourned.

Appreciating the Dispenser.

At the annual meeting of the Salisbury Provident Dispensary last week, it was mentioned that Dr. Roberts, who has been a great friend of the institution for many years, had this year raised his subscription by 5l., in order that that amount might be given to the dispenser (Mr. Terril) as an honorarium for his services during the past year without touching the funds of the institution. During the past year he had dispensed 18,017 bottles of medicine, apart from that other medicaments, which were numerous and varied. On the motion of Mr. Hammick, seconded by Mr. S. R. Atkins, the gratuity was voted.

An Appeal to Chemists.

The following advertisement appeared in the *Eastern Morning News* of January 24:—

SULPHONAL TABLOIDS.—Will Chemists and Drug Stores oblige a parent by not selling these to a tall, delicate young lady, under medical treatment?

"A tall, delicate young lady" is rather indefinite.

A Fruitless Burglary.

The Monastery Street premises of Messrs. Bing & Co., chemists and druggists, Canterbury, were invaded during Saturday night. The burglar obtained an entrance by forcing the door, but appeared to have gone away without anything of value.

Coroner and the Sale of Patent Medicines.

At an inquest held at Ebwal on January 20, on a child aged six months, who died after having had a teething-powder, the Coroner said he hoped the day was not far distant when the sale of medicines, patent or otherwise, by people who knew nothing whatever about their composition would be made illegal. He did not say the powder had done harm, but the doctor had stated that death was due to convulsions. The jury expressed their satisfaction with the Coroner's remarks.

Medical Officer as Analyst.

Dr. Robinson, of Dover, is the medical officer of health to East Ashford, and the Rural District Council have passed a resolution declining to furnish Dr. Robinson with particulars as to the surroundings of the neighbourhood whence samples of water were taken. Dr. Robinson said it was necessary for him to have this information, and he has further told the Council that he is not compelled to act as general analyst, and that as long as the Council declines to give him the information he asks for he shall decline to carry out the analyses, which he has hitherto undertaken to avoid the Council extra expense. The Council decided to ask the Local Government Board what are the duties of Dr. Robinson in this respect.

Chemist and Street-preacher.

Mr. Wm. Gregory, chemist and druggist, Weymouth, was one of the witnesses at the Weymouth Police Court on January 19 in a charge of obstruction against a street.

preacher. Mr. Gregory, who resides near to where the obstruction was caused, said the service lasted from 8.30 until 10 o'clock. The whole of the crossing was obstructed, and pedestrians had to go out into the road in order to pass. Mr. Gregory added that he did not want to interfere in any way with religious liberty, but he could not put up with the noise and obstruction. Sir R. N. Howard (a Magistrate): I hear the word "preaching" used? Mr. Gregory: Halloing, bellowing. Sir R. N. Howard: Did you listen to the word? Mr. Gregory: Nay, nay. (Laughter.) The Bench imposed a fine of 5s., or in default seven days' hard labour.

Festive Pharmacists.

A musical and social meeting of the Brighton Junior Association of Pharmacy was held on January 19, Mr. C. A. Blaney (President) in the chair. An excellent programme was most efficiently carried out.

Messrs. Headland & Co., chemists, Brighton, held their annual staff dinner on January 20, at 90 Western Road. There were about thirty present. An excellent repast having been partaken of, a long programme and toast-list was proceeded with. The toast of "The Visitors" was responded to by Mr. W. Norman Roe and Mr. Charles Harvey. Mr. Costerton (the host) thanked them all for their kindly expressions, and hoped that they would be present on the next similar occasion.

On January 20 the annual ball of the Midland Pharmaceutical Association was held at the Grand Hotel, Birmingham. About one hundred and thirty ladies and gentlemen attended, including the President (Mr. F. G. Gibson, Wolverhampton) and the Vice-President (Mr. Jeffrey, Poole). Mr. W. Gilmer was M.C. The dance, which commenced at 8 o'clock, was continued till 2 the following morning. At the supper, held during the evening, the President occupied the chair. A word of praise is due to Mr. H. S. Shorthouse, the Hon. Secretary, for the excellent arrangements. Mr. Chas. Thompson was Chairman of the Ball Committee.

A successful social evening of the C.A.A. was held on January 20 to inaugurate the new half-session. The President, on taking the chair, called attention to the new presidential chair, which, he said, was a New Year's gift to the Association from Mr. Michael Carteighe, and would lend an added dignity to the office of its occupier. They could not look at it without thinking of its considerable intrinsic value, but he thought the donor would rather that they looked at it as a token of his sympathy with the Association's work, and as a tangible expression of his interest in the rising generation of pharmacists, which the Association represented. He proposed, and Mr. C. J. Strother seconded, a vote of thanks to Mr. Carteighe for his generous gift. A good programme of music had been arranged by Mr. Strother, to whom a vote of thanks was accorded at its conclusion.



Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

British Pharmaceutical Conference, 1898.

At a meeting of the Ulster Executive Committee, held on January 18—Mr. J. C. C. Payne, J.P., in the chair—the Local Secretary (Mr. R. W. McKnight) read a letter from the Hon. Secretaries of the Conference approving of the local committee's suggestion as to the date of the meeting, entertainments, excursions, &c. Although the secretaries to the committee reported favourably on the progress of the guarantee fund, it was considered advisable to keep it still open for subscriptions, and a small committee was appointed to make a further effort to secure the amount aimed at. The Students' Union building in the grounds of the Queen's College was considered a suitable place for the

meetings, and a sub-committee, consisting of the Chairman, Dr. Fielden, Dr. Tweedie, Messrs. S. Gibson and J. Tate, was appointed to wait on the College authorities to make the necessary arrangements. Four excursion-routes were suggested for the excursion, and a sub-committee was appointed to make inquiries and report at the next meeting. The committee ask members of the Conference to keep in mind that Tuesday, August 9, has been fixed for the opening meeting. This will give English and Scotch delegates the opportunity of crossing on Monday night, so as to avoid unnecessary waste of time; and we are asked to assure friends on this side of the water that everything will be done to make the visit to Belfast an interesting one.

Ulster Chemists (Limited).

The prospectus of this company, of which we published an anticipatory note a fortnight ago, has just appeared. The businesses amalgamated into one concern are the following:—

Belfast—R. W. McKnight & Co., Carlisle Circus Apothecaries' Hall; established 22 years; unexpired lease, 25 years.

Belfast—W. H. Bell & Co., pharmaceutical chemists, 25 and 27 North Street; established 37 years; unexpired lease, 21 years.

Belfast—W. J. Rankin, chemist and druggist, 171 and 173 New Lodge Road, established 15 years; unexpired lease, 21 years.

Belfast—Samuel Gibson & Co. (Limited):—

" 62 and 64 Mill Street; established 41 years; yearly tenancy.

" 67 York Street; established 7 years; unexpired lease, 5 years.

" 79 Peter's Hill; established 40 years; unexpired lease, 9 years.

" 124 N'towards Road; established 15 years; unexpired lease, 9 years.

" 50 Albert Bridge Road, established 17 years; unexpired lease, 5 years.

Newry—Anderson & McCrea, chemists and druggists, Hill Street; established 30 years; lease, 999 years.

Londonderry—D. Galbraith & Co., pharmaceutical chemists, Strand Buildings; established 40 years; unexpired lease, 14 years.

Coleraine—James G. Fyvie, pharmaceutical chemist; established 18 years; new lease for 21 years.

Armagh—Gray's City Drug Hall (Limited); established 100 years; unexpired lease, 35 years.

Lisburn—John S. Anderson, pharmaceutical chemist; established 10 years; yearly tenancy.

Cookstown—Samuel McKimney, pharmaceutical chemist established 20 years; yearly tenancy.

Limavady—G. W. Lawson, druggist; established 3 years; unexpired lease, 19 years.

Dungannon—R. C. Marshall, chemist and druggist; established 40 years; held under lives for ever.

Ballymena—James Acheson, pharmaceutical chemist; established 18 years; yearly tenancy.

The directors are:—

Colonel James M. McCalmont, J.P., M.P., Holywood, co Down.
Thomas Needham, chemist (Managing Director, Needham's, Limited, Huddersfield, Leeds, and London).

Samuel Gibson, chemist and druggist and wholesale merchant, Belfast.

Hugh T. Galbraith, L.R.C.S.E., L.R.C.P.E., L.A.H.I., &c., Strand Buildings, Londonderry.

R. W. McKnight, Ph.C. (Member of the Council of the Pharmaceutical Society, Ireland), Belfast.

John McCrea (Anderson & McCrea), chemist and druggist, Newry.

The authorised capital of the company is 100,000*l.*, but only 60,000*l.* is to be issued at present—namely, 20,000*l.* in 6-per-cent. cumulative preference shares (5*l.* each) and 40,000*l.* in ordinary shares (1*l.* each). The seventeen businesses have been acquired by Mr. Thomas Henry Oldfield, who sells them to the company at a profit, the amount of which is not shown, for 50.327*l.*, one-third of which may be paid in shares. The purchasers of these businesses get no freehold property, though in one case (at Newry) they get a lease of 999 years. Messrs. Thomas Tomlinson & Son, of Manchester, estimate the stock, fixtures, plant, accessories, and goodwill of the seventeen businesses at 44,752*l.*; and Messrs. Dyson, Wright & Co., accountants, Belfast, find that the average yearly profits of the same businesses have amounted to 6,789*l.* 2*s.* 7*d.*, "subject to the original

vendors' remuneration for personal management." The directors, in their calculations, take this profit and add to it 1,500% for "increased profit as result of amalgamation and further extensions to accrue from the additional capital," which gives them an estimated revenue of 8,239% 2s. 7d. This, they show, would enable them to pay the 6 per cent. on the preference shares and 10 per cent. on the ordinary shares, and would leave 3,089% 2s. 7d. for administration and reserve fund.

Business Change.

Mr. Michie, L.P.S.I., Main Street, Blackrock, Dublin, has transformed his pharmacy into a handsome up-to-date medical hall. Mahogany mountings and plate-glass panels give a rich and tasty appearance to the establishment.

Chemist and the Election.

In connection with the contest last week at Dublin between Count Plunkett (Nationalist) and Mr. James Campbell, Q.C. (Conservative), for the Parliamentary representation of the St. Stephen's Green division, a circular was issued on January 18 by Mr. R. J. Downes, President of the Pharmaceutical Society of Ireland, to the members of the Society, stating that on the advice of the Law Committee he had written to the two candidates asking them to receive a deputation of the Society for the purpose of laying before them the difficulties in the administration of the Pharmacy Acts, and to solicit their support in any legislation which might offer. Count Plunkett did not reply to the letter, but Mr. Campbell did promptly, and on the evening of January 18 a deputation consisting of the President and Messrs. Wells, Kelly, and Grindley saw Mr. Campbell, who stated that he thoroughly understood and sympathised with the matters mentioned to him, and promised the Society his support in furthering its legitimate objects. This was quickly made known to the electors, with the result that on Saturday morning last after a keen contest (over 6,000 votes being polled) Mr. Campbell was returned by a majority of 139 votes, which about represents the strength of the chemists' vote in the division.



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Watt and Water.

The Watt Memorial lecture, given at Greenock on the anniversary of the great engineer's birth, will this year be delivered by Professor T. E. Thorpe. The subject will be "James Watt and the Discovery of the Composition of Water."

New Soap-works.

A soap-factory has been opened by the Scottish Co-operative Wholesale Society in Grangemouth for the manufacture of household soap. A plant capable of turning out 50 tons of soap per week has been laid down, as well as Dr. Lewkowitsch's patented glycerine-plant for dealing with the refuse. It is proposed to add the making of fancy soaps at a later period, the works having been constructed so as to admit of extension.

Presentation.

Mr. William Dunn, of Mr. James Taylor's, wholesale druggist, 132 Irongate, Glasgow, was on January 20 presented by his fellow employes with a timepiece, on the occasion of his marriage. Mr. Thomas Taylor, youngest son of Mr. Taylor, made the presentation. The rest of the evening was given over to singing.

The Glasgow Fire.

At the inquest held on the bodies of the three firemen who lost their lives owing to an explosion on the premises of

Messrs. Hattrick & Co., wholesale druggists, Renfield Street, Glasgow, during the fire which occurred on January 7, Mr. W. L. Hattrick, the sole partner, was examined with a view of ascertaining the cause of the explosion. He was examined as to whether glycerine and nitric acid and sulphur and chlorate of potash were in close proximity, but pointed out that even if they had been together he thought the water from the fireman's hose present in the basement would prevent any combination taking place. Mr. Hattrick said it had occurred to him that coal-gas was the cause of the explosion, a lead pipe having become fused during the progress of the fire, and allowed gas to escape. According to the Corporation-books the quantity of gas the meter registered was more than three times what it was usually. Mr. Robert Tatlock, public analyst, Glasgow, said he had examined a list of chemicals and drugs kept in stock, some of which were very inflammable, but none of them accounted for the explosion in a satisfactory manner. He thought an escape of 18,000 feet of gas must have made itself felt, but he was not satisfied that it caused the explosion. The jury found that the men lost their lives by the fall of the building, but that there was not sufficient evidence to show the cause of either the fire or the explosion.

Edinburgh Chemists' Ball.

The fifteenth annual ball of the Edinburgh and District Chemists' Trade Association took place at the Freemasons' Hall, Edinburgh, on January 20. The M.C.'s were Messrs. Rowland and Jardine. Over seventy couples enjoyed a very pleasant evening.

French News.

(From our Paris Correspondent.)

ILLNESS OF MR. SWANN.—The many friends of Mr. Swann, the well-known English chemist, of the rue Castiglione, Paris, will learn with regret that he has been seriously indisposed for some weeks past. He is now in an improved state of health, but is still unable to leave his room.

THE INFLUENZA seems likely to remain in Paris for the rest of the winter. Its presence has been officially recognised by the *Bulletin of Municipal Statistics*, which is a crowning honour for an epidemic. At first patients appeared to be attacked in a somewhat modified form, but the attacks are becoming more serious.

SIX THOUSAND TOOTH-BRUSHES were seized by the police a few days ago in the Belleville quarter of Paris. Three street hawkers were offering them for sale at 1d. each. The price did not tempt the public, and business was slack; but the police, with a perspicacity unusual to them, found the price too low for the quality of the articles, and took the hawkers under their protection. The tooth-brushes were found to have been stolen from a Paris manufacturer, M. Chantepeie, rue Albany, Paris, who was able to get them back. The men have gone to prison.

MONKS AND KAOLIN.—Some three years ago the monks of the Monastery of the Grande Trappe de Soligny bought from a lady neighbour, a widow, a plot of ground measuring about 24 acres for the equivalent of 250l. One of the monks, an experienced chemist and geologist, had previously found that the land contained rich deposits of kaolin, so that soon afterwards a company was floated under the auspices of his Order with a capital equal to 80,000l. for the purpose of turning the kaolin to account. The Monastery reserved to itself a sum of 32,000l. in shares as vendors. On learning this the lady thought she had not been fairly dealt with by the priests, and brought a law-suit, which has been before several Courts, and lately, and finally, the Appeal Court has decided that the lady is entitled to participate in the wealth coming from the land she sold, and three experts have been named to settle the amount she is to receive.

A QUESTION OF FEES.—There has been a rumour in medico-pharmaceutical circles in Paris for some time past, that a physician, whose *clientele* is principally amongst members of the Anglo-American Colony here, has a law-suit pending with a fair patient. Last spring the lady was under

the doctor's treatment, and, according to her account, she made a special stipulation that no narcotic drugs were to be used in her treatment. It is alleged that this condition was not observed, and if anything turns on it, the pharmacist who dispensed the prescriptions will be a principal witness. The "little bill" is said to amount to 670*l.* for ordinary attendance, and 500 guineas for two professional visits, of fourteen days in all, with the patient at a seaside watering-place.

MUSTARD AND LEAD-POISONING.—M. Carles, a well-known chemist of Bordeaux, has called attention to a risk connected with the use of French mustard—a misnomer, by the way, for pepper, cayenne, ginger or other spices, and vinegar are the usual ingredients. M. Carles' explanation is, that the pots are usually corked by machinery, and then covered with a capsule made of tin and lead. Most people find the cork too large to go into the pot again, and use the capsule as a covering. The latter is in this way exposed to the action of the vinegar, the lead in the capsule becomes oxidised, and acetate of lead is formed, which easily falls into the mustard. The acetate is white and sweet in taste, and therefore not likely to attract attention. M. Carles is consequently of opinion that people would readily eat it with the mustard, and thinks, if taken frequently, this might easily cause lead-poisoning.

A PORTRAIT OF DR. EVANS, the famous American dentist, who died last month, may not be too late to put before your readers. I observe that various American journals devote much of their space to somewhat imaginative talk regarding the doctor, and nearly all of them have much exaggerated the fortune which he left. One put it down at \$10,000,000 as a minimum, and another, in a spirit of emulation, perhaps, added \$2,000,000 to that. Even Parisian journals, as I reported a fortnight since, begin to speculate upon Dr. Evans's fortune, and its destination; but I have as yet



received no information which would compel me to go back upon the more modest estimate given in *THE CHEMIST AND DRUGGIST* the week he died.

PROFESSOR BOURQUELOT, who was elected this month by the Paris Society of Pharmacy as its President for the coming year, stands out prominently amongst a galaxy of highly-educated and exceedingly industrious pharmacists belonging to the Society, who have only just reached middle-age, but have already earned for themselves a prominent place in the French world of science. Dr. Bourquelot is a native of the Ardennes Department, and has just entered on his forty-third year. He took his first-class pharmacien's diploma in 1880, and two years later secured his degree of doctor of medicine. For several years past he has been chief pharmacist of the Saënne Hospital at Paris, which post gives him a high standing. In fact, such positions are much sought after and even envied. Dr. Bourquelot is also a professor at the Paris School of Pharmacy, and was elected last month a member of the Academy of Medicine here. He is very popular with his fellow-members of the Society of Pharmacy, a man easy of approach, and who always has time to give a courteous hearing to any inquiry. One might speak of him as a typical hard-working scientist and as unlike the conventional Frenchman, as so considered abroad, as one can well imagine.

Colonial and Foreign News.

WHERE "PATENTS" ARE TABU.—Messrs. E. H. Sargent & Co., the well-known Chicago pharmacists, who were recently burnt out, will resume business at 106-108 Wabash Avenue on February 1. In this connection the *Pharmaceutical Era* mentions that in the new pharmacy "patent medicines and

proprietarys will have no place, except such as are necessary to be handled in the conduct of a first-class prescription drug-store."

"CROWN" PERFUMES IN U.S.A.—The Crown Perfumery Company are proceeding against Messrs. Lazell, Dalley & Co., of New York, for using the name "Crab Apple Blossoms," and ask \$40,000 damages for infringement of their trade-mark. The Crown Company's quarters in New York are to be moved from Fifth Avenue (the Piccadilly of New York) to East Nineteenth Street.

A MILLION IN MALTINE.—The Maltine Company, of Silver Springs, Wyoming County, has been incorporated with a capital of \$1,000,000, in 10,000 shares. The stockholders and directors are Lieut.-Gov. Timothy L. Woodruff, Brooklyn, Mr. Lucius H. Bigelow, New York City, and Mr. Rodney A. Ward, Montclair, N.J. The first named takes \$333,400 of the stock, and each of the other two \$333,300.

DRUNK ON MEDICATED WINE.—The girls employed in the manufacture of beef-and-iron wine at a factory in New York took to drinking toasts to a "happy new year" in medicated wine, with the result that they were all more or less intoxicated, and one girl so much so that she was found asleep in the street by the police early next morning. Charged before the Magistrate with being intoxicated, she was dismissed, promising to avoid beef-and-iron wine in the future—at least in large quantities.

SECRET MEDICINES IN GERMANY.—An Imperial order has just been published in Germany dealing with the sale of secret medicines. The order requires that such medicines shall only be sold by apothekers, and they must know the contents of medicine dealt in, otherwise it cannot be sold. This will also apply to medicinal specialties ordered in physicians' prescriptions. The order also permits the authorities to publish notices opposing the recommendation of such remedies, and showing the cost of them.

BACTERIOLOGICAL INSTITUTE FOR CEYLON.—The Ceylon Government have accepted the offer of Mr. J. W. C. de Soya of 10,000*r.* as a nucleus for the establishment of a Bacteriological Institute in Colombo, in memory of his father. Already all the instruments, appliances, and materials are on the way out from this country. The site selected for the institute is behind the Ceylon Medical College. When completed, the institution will be placed in charge of Dr. H. M. Fernando, Registrar of the Ceylon Medical College.

CINCHONA IN INDIA.—Mr. J. E. O'Connor, Director-General of Statistics for India, states in his report for the official year 1896-97 that there were 5,916 acres of land under cinchona-cultivation, of which about 72 per cent. was situated in Southern India, the remainder being in Bengal. The area in Bengal, comprising 1,636 acres, lies in and near Darjeeling. In Southern India there are 1,762 acres in the Nilgiris, 731 in Malabar, 1,402 acres in Travancore, 335 acres in Mysore, 8 in Coorg, and 42 in Madura. In Bengal the land under cinchona was in the main planted and is maintained by Government, the plantations of the State covering 1,556 acres, but in the Madras Presidency the industry is largely in private hands, the State plantations covering under 800 acres. During the twelve years ending 1896-97 the area under cinchona has fallen from 10,418 acres to 5,916 acres. There has been a substantial decline in Bengal, as well as in Madras, and in Coorg the cultivation has been almost entirely abandoned.

THE EDUCATED KAFFIR.—Mr. D. D. Donaldson, chemist, of Commissioner Street, Johannesburg, lately discharged from his employ a native servant who had committed some offence. He has since received a letter from the discharged "boy," which begins thus: "I trust you will pardon me for addressing you on the subject of our recent misunderstanding, and that you will be pleased to receive my sincere expression of regret for the hasty and unjustifiable conduct into which I was momentarily betrayed." After this eloquent beginning "Enoch M. Soutorgen" goes on to remark that "Most painful would it be to me under any circumstances to terminate this honourable and happy connection, but still more painful to quit your service through an unfortunate incident which, ever since its occurrence, has given me ceaseless uneasiness, and which I shall ever regret." It will be agreed that this polite letter-writer knows how to apologise better than some Europeans.

The Winter Session.

ROYAL INSTITUTION.

THE first Friday-evening lecture of the session took place at the Royal Institution on January 21, when Sir John Lubbock gave an interesting hour's lecture on

BUDS AND STIPULES.

Sir F. Bramwell presided, and the audience included the President of the Pharmaceutical Society (Mr. Walter Hills). Over 60 diagrams were on the wall, illustrating the way buds were protected from cold.

Sir JOHN LUBBOCK said that although he would have rather delivered his lecture in the spring, the exceptional mildness of the winter had enabled him to have on the table specimens of buds which were usually not obtainable till later. He was led to investigate the subject by a remark he had met with, that in rock roses some are found with stipule and some without, and his desire to find the reason. He went on to describe how the buds were protected, in some cases by means of the old leaves, and in others by the leaf-stalk. Hair and scales were also used for the purpose of protection, and in speaking of the ash-bud he explained Tennyson's simile of hair being as "black as the ash-bud in front of March," the ash-bud appearing black because it is thickly covered by black downy hair; but as the bud tissue grows the hairs become further apart, and so make the bud lighter in colour as the spring advances. The function of hairs in Alpine regions seemed to be to keep off excess of moisture, or in dry and desert countries to prevent too free transpiration of moisture, or again for warmth, "a great-coat, as it were." Stipules were mostly a protection for the bud, though sometimes fulfilling the function of leaves. The form varied considerably; as a rule where the leaflets were large and broad, the stipules were broad, whilst in case of a narrow leaf only narrow stipules were found. The lecturer showed by folding papers why the seed-leaves of plants differed from the other leaves, because being folded in the seed they had to conform to its shape, the bud in like manner influencing the form of the mature leaf. The unusual shape of the tulip-tree's leaf he believed was due to the shape of the bud, which contained the stipules, the stalk, and the leaf folded upon itself, the latter just filling the space left by the two former. Answering the question with which the lecture began, he thought the evidence conclusive that where stipules were present the leaf-stalks were narrow, while stipules were absent when leaf-stalks were broad. In conclusion, the lecturer briefly referred to the processes attendant on the fall of the leaf in autumn, and trusted his audience would become unceasingly interested in the unfolding of Nature in the coming spring—

So careful of the type she seems,
So careless of the single life.

EXHIBITION OF NOVELTIES.

After the lecture most of the audience stayed to examine the exhibits displayed in the library. Among them was the "Cox Generator," in several forms, for producing electricity direct from heat. These generators open up an interesting problem, and would seem to be efficient substitutes for primary batteries. The source of heat is a Bunsen or spirit flame radiating on to an alloy of metals protected by a covering of cement. The voltage of these generators is constant and there is no danger of short-circuiting them. They were shown in action driving a coil, plating-bath, &c., and would be useful for charging accumulators for chemists who use them in x-ray work in those places where public-lighting stations are not within convenient distance. A new method of accurately centring ophthalmic lenses was also shown in action.

MIDLAND CHEMISTS' ASSISTANTS' ASSOCIATION.

At the meeting held on January 19, Mr. H. Jessop presiding, Mr. H. S. LAWTON read a paper on "Pharmacy Law." He briefly reviewed the law as affecting chemists and druggists during the greater part of the century, alluding, in turn, to the Apothecaries Act of 1815, the Pharmacy Act of 1852,

the Poisoned Grain Act of 1863, and the Poisoned Flesh Act of the following year, and the Pharmacy Act of 1868. He mentioned the sections in this Act which would be repealed by the Bill to be introduced into Parliament this session. Chemists, he said, had the monopoly of selling poisons. They were, as a body, well fitted to be recognised as public dispensers of medicines. The examinations were of a liberal description, and such as to make it no longer possible to keep chemists in a subordinate position in a society representing their interests. A united pharmaceutical society, representing the bulk of registered men, would be better able to demand that all future public appointments should be offered only to qualified men. For this reason the proposed Bill was wise. With this in view Mr. Lawton proposed:—

That this meeting of the Midland Chemists' Assistants' Association hereby expresses its unqualified approval of the draft Bill proposed by the Pharmaceutical Society of Great Britain, and pledges its members to give it every possible support.

Mr. F. J. WALTON seconded, and expressed the opinion that the time had come when the Minor men should assert themselves more than in the past. After a discussion of a conversational nature, the resolution was passed unanimously.

On the motion of the PRESIDENT, seconded by Mr. E. OSBORNE, it was decided to send copies of the resolution to the Secretary of the Pharmaceutical Society, to the Secretary of the Federation of Local Associations, and to the Midland Pharmaceutical Association, and to offer to co-operate with the senior Association in promoting a petition to Parliament in support of the Bill.

PLYMOUTH, DEVONPORT, STONEHOUSE AND DISTRICT CHEMISTS' ASSOCIATION.

At the quarterly meeting, held on January 19, Mr. James Cocks (President) in the chair, Mr. J. R. JOHNSON, hon. educational secretary, reporting on the classes, regretted that the number did not come up to his expectation. A member had presented a case of fifty microscopic slides to the Association, and Mr. Maurice's gift of 2*l.* 2*s.* would be expended on a lantern and accessories. A scheme was also formulated to approach the technical schools with regard to establishing a full course for the Minor examination.

The President of the Trade Section (Mr. PARK) reported that the Section had done good work in promoting co-operation in buying, and in enabling members to buy largely without over-stocking. Approximately the amount of goods purchased during 1897 was 600*l.* worth. The Section had also written to manufacturers and wholesalers urging them to join the P.A.T.A., thus assuring the retailer a legitimate profit for handling their goods. The replies to some of these communications had not been satisfactory from the retailer's point of view, and the question arose whether active measures should not be taken to prejudice the sale of those articles which did not bear a fair margin of profit.

Mr. PARK moved, and Mr. J. D. TURNER seconded—

That in regard to "Sanitas," this Association, numbering sixty-three chemists in business, greatly regrets that the proprietors appear to have mistaken the opinions of chemists with regard to their preparations. The fact of so large a number (3,000) having joined the P.A.T.A., and that its secretary, and the secretaries of various local associations, had communicated with them, will render it almost superfluous for each individual to communicate his views; and this Association begs to point out that 1*s.* Sanitas fluid is listed and sold in this town (Plymouth) at 9*d.* by the Army and Navy Stores, and regards it as folly on their part to recommend it. The endeavour to make mutual agreements locally has proved unworkable.

The motion was adopted.

IRISH PHARMACISTS' ASSISTANTS' ASSOCIATION.

At Dublin, on Friday last, a meeting of this Association was held at 67 Lower Mount Street. Mr. W. J. Dunwoody presided. Mr. W. McCarthy wrote regretting his inability to read his promised paper that night, but hoped to be able to do so at a future date. Mr. Preston wrote complaining as a member of the Association of the inattention of THE CHEMIST AND DRUGGIST to business queries. He stated that he asked for information through its columns, but was ignored. A hint from the Association as to the wisdom of

that course might, he thought, prove useful coming from the Association. The CHAIRMAN said there were so many queries sent to THE CHEMIST AND DRUGGIST that it was difficult to answer every one. Mr. JOHNSTON thought the *C. & D.* was very generous in its correspondence column. Mr. TURNER considered it bad policy to get into loggerheads. It was very hard to beat an editor, and there were some people who never stopped writing. (Laughter.) He thought the letter should be marked noted. Mr. JOHNSTON said it was the first complaint ever made about the *C. & D.*, and coming from a member they were bound to notice it. Mr. O'SULLIVAN moved that Mr. Preston's letter be sent on to the Editor of THE CHEMIST & DRUGGIST. They could not, however, insist on a reply being given to Mr. Preston's query, and had to depend altogether on the Editor's courtesy.* A discussion on "Is a Pharmaceutical Training Beneficial to the Physician?" then took place. Mr. O'SULLIVAN referred to a letter on the subject which appeared some time ago in the papers, in which it was stated that a certain college threw cold water on a medical student's previous experience in a pharmacy. He considered the statement that a sufficiently good pharmaceutical training could be gained in three months to serve a physician's purpose was hurtful to the pharmacist and a slur on the Society. There were men at the top of the medical profession who were old pharmaceutical assistants, one of them being an examiner in the Apothecaries' Hall. He said a man could not be a good prescriber if he were not a good pharmacist. He thought that a medical man who could not dispense a rational prescription was an irrational prescriber. Mr. JOHNSTON said he knew a medical man in Dublin whose four years spent at a pharmaceutical counter, and his consequent knowledge of dispensing, brought him in an average of 120*l.* a year. As an instance of the "three months' course," he said that recently a medical man asked for 20 gr. of bromidia, and was astonished at being told it was a liquid. Mr. O'SULLIVAN followed up this reminiscence by relating the case of a third-year medical student who told him that 30 gr. of sulphate of magnesia was the dose for an adult. (Laughter.) All this pointed to the want of a proper knowledge of pharmacy. The meeting then expressed its opinion that a pharmaceutical training was indispensable to the physician. A business meeting followed. Mr. J. McMichael, 61 North Strand Road, and Mr. P. O'Toole, 63 Summer Hill, Dublin, were elected associates. Final arrangements for the annual dance on January 26 were made, Messrs. Johnston and Dunwoody being appointed M.C.'s. Messrs. Turner and Hunt kindly promised to act as door-stewards. Mr. O'SULLIVAN thought the Association should have a distinctive crest or motto, and his suggestion was noted for attention.

Legal Reports.

HOMOCEA (LIMITED) *v.* CRAIG.

IN the Queen's Bench Division of the High-Court of Justice on Friday, before Mr. Justice Channell, the case of Homocœa (Limited) *v.* Craig came on for hearing. Mr. Marshall, Q.C., who appeared for the plaintiff company with Mr. Pollard, said the action was to recover 1,800*l.*, being a call of 10*s.* per share on 3,600 shares in the company, which had been underwritten by the defendant. He called Major-General Barwell, the promoter of the company, who produced a letter from the defendant agreeing to take shares, or a certain proportion of shares, if the company was not fully subscribed. It was, in fact, the usual underwriting letter. His Lordship: What is the proper proportion? Witness: Seventy per cent. He proceeded to say that in response to the underwriting-letter he sent an acceptance of it on April 6 or 7 last. In reference to an allegation made by defendant, he denied that any person named Mercer or Richardson was authorised to vary the contract. An allotment was made on defendant's

application, and he had received no notice withdrawing it. He knew nothing whatever of what had transpired between defendant and any other person. Mr. F. H. Bowden, the present secretary of the company, produced the minute-book containing a resolution to allot certain underwritten shares as per list. The number of shares allotted was 63,496 in certain proportions. That was in April last. Mr. Montague Elliott Pavey, late secretary of the company, corroborated, and said the letter of allotment for 3,600 shares was duly sent to the defendant. The number of shares allotted to the public, including country applications, was 17,204. The others were divided in proportion amongst the underwriters. The underwriting list came to 80,000*l.*, and they were allotted 72 per cent. His Lordship gave judgment for the plaintiff company for 1,800*l.*, *plus* interest for eight months at 10 per cent.—in all, 1,920*l.*—and costs.

A GERANIUM-OIL CONTRACT.

THE Société Générale Mercantile of Paris recently brought an action in the High Court of Bombay against J. Stanley Smith and another, trading as Bertie Smith & Co., for breach of contract. The plaintiffs stated that defendants contracted to deliver at Marseilles 2,000 kilos. of geranium oil at the rate of 5*fr.* a kilo. The defendants, however, maintained that the contract had really never been settled, and that it was only a proposition which they put forward; further, that the clause "at francs 5 . . . per kilo., c.i.f., Marseilles," in a letter of theirs was inserted without their authority and after it was signed, this clause not occurring in their letter-book. Much conflicting evidence was given, in the course of which Mr. Justice Fulton got experiments made with copying-ink, and it transpired that defendants were under the impression that they could buy the oil at 5*fr.* per maund (82½ lbs.) instead of 5*fr.* per seer (7 lbs.). Mr. Justice Fulton ultimately gave judgment for the plaintiffs for 2,500*fr.* converted into rupees with interest at 6 per cent. from the date of plaintiff judgment, and costs and interest on judgment at 6 per cent.

[In connection with this matter the defendants write to us pointing out the hardship to Bombay traders in there not being a properly-constituted commercial court in that city, and no judge except an elevated civil servant without commercial experience. We gather from their letter that the judge in this case is neither a barrister nor solicitor, which seems extraordinary.—ED. *C. & D.*]

THE POISONED GRAIN ACT.

AT the Abbeydore Police Court, on January 21, Jonathan Probert, farmer, Turnastone, pleaded guilty to having sown poisoned wheat on his land on November 13. William Maddox, a gamekeeper, said defendant complained to him of the damage the pheasants were doing to the seeding. He told defendant that the gentlemen would be down on the following day to shoot the pheasants at Chauston Wood, and on the following day they would shoot on defendant's land, so as to clear off the pheasants on his ground. About two hours afterwards, he saw defendant sowing seed. He went up to him and said, "You don't mean to say you are putting down poisoned grain again?" He replied that he had, as he was going to Hereford on the following day, and could not keep his children away from school to scare the rooks. On November 17 and 18, they found nine pheasants dead from poisoned wheat. There were hundreds of birds of all sorts lying about dead. His son counted forty under one tree. The defendant, in reply to the Bench, said he had suffered considerable loss and damage by the game and wild birds. The Bench inflicted a fine of 5*l.* and 8*s.* costs, and informed defendant that if brought up again on a similar charge he would be fined the maximum penalty of 10*l.*

SALE OF FOOD AND DRUGS ACT.

DEFECTIVE SPIRIT OF NITROUS ETHER.

AT the North Holland (Boston) Petty Sessions, on January 19, Henry Mills, of Kirton, described as a chemist (but whose name does not appear on the register), was summoned for selling spirit of nitrous ether containing 7.93 per cent. of water, and below the requirements of the B.P. The

* Perhaps Mr. Preston is one of those who send us queries without mentioning their names. We get many of these from various parts of the country, and they are the only queries which are not attended to. All others are.—ED. *C. & D.*

defence was that the loss in strength was due to evaporation through frequent opening of the bottle. A fine of 40s. and costs was inflicted.

COUNTY-COURT CASES.

ABOUT ANISEED BALSAM.

AT Tunbridge Wells County Court, on January 20, before Judge Emden, Mr. Alfred S. Tolhurst, druggist, sued Charles Watson for 7*l.*, due for balsam of aniseed supplied. The defendant had been engaged as traveller to sell balsam of aniseed on 20-per-cent. commission, but there was a stipulation that the commission was to be refunded on goods returned or when bad debts accrued. The plaintiff's claim was in respect to this stipulation. After hearing evidence, his Honour found for the plaintiff for 4*l.*

A MARRIED WOMAN'S DEBTS.

AT Folkestone County Court, on January 20, before Sir William L. Selfe, Mr. John Stainer, chemist and druggist, 59 Sandgate Road, Folkestone, sued Mrs. Wingfield for 6*l.* 3*s.* 11*d.*, due for goods sold and delivered.

Mr. Atkinson appeared for the plaintiff, and Mr. Haines for the defendant.

Mr. Atkinson stated that his client only knew Mrs. Wingfield in the matter. She left the town without paying her account, and Mr. Stainer wrote to her solicitor for payment. He was referred to Mr. Wingfield's solicitor, who, on being written to, replied that Mrs. Wingfield had a separate estate, and that debts such as this one were to be paid by her under an arrangement between her and Mr. Wingfield.

Mr. Stainer, in his evidence, said he never saw Mr. Wingfield. The goods were ordered by Mrs. Wingfield or her attendants. After he sent the account to Mr. Wingfield that gentleman called on him.

Mr. Haines contended that the plaintiff should have joined the husband as defendant. He mentioned that other cases were pending which would be affected by the decision in this one. He asked for an adjournment, as he believed a suit for judicial separation was pending.

Mr. Atkinson replied that the presumption in law was that if a lady was living apart from her husband she was acting on her own responsibility.

Replying to Mr. Haines, Mr. Stainer said he knew there was a Mr. Wingfield. He had supplied them in years past. At that time he made inquiries, and found there was a little difficulty, but he was told that Mr. Wingfield was "a good and nice man," and that the account would be paid all right.

It was stated that Mr. Wingfield's solicitors had written offering 3*l.* 5*s.* 2*d.* in settlement, and stating that all the goods included in the account were not necessities. They added that Mr. Wingfield had no wish that Mr. Stainer should lose his money, but under the circumstances he could not discharge certain liabilities which his wife incurred.

Mrs. Sellon, defendant's housekeeper, stated that Mr. Stainer's account was not paid because it was not sent in before Mrs. Wingfield left Folkestone. She further stated that Mrs. Wingfield had about 90,000*l.*, and her husband received the money under the marriage settlement. Mrs. Wingfield only had her "pin-money" paid into her banking-account. He had the absolute right to spend and use 3,000*l.* a year, and she (Mrs. Wingfield) had only 500*l.*

His Honour said it appeared to him that Mr. Wingfield must be made a defendant. Questions might arise whether Mrs. Wingfield pledged her husband's credit beyond a certain amount, and whether the goods supplied were such as a lady of her station required. He proposed to adjourn the case in order that the husband might be added as a defendant.

On further consideration, however, his Honour sent for the two solicitors, and informed them that he had decided to give judgment for the plaintiff for the amount claimed with costs, to be paid in fourteen days.

AT A RECENT EXAMINATION, but we are not allowed to say where, the following answer was given; it was at a pharmaceutical examination, and is quite genuine:—

Question: What is Chlorine? Describe it.

Answer: Chlorine is of three kinds—viz., lumbago, plum-bago, and the third is a liquid gas.

Marriages.

FITZPATRICK—GAYNOR.—On January 17, at the Church of St. Laurence, Dublin, by the Rev. Father Breen, C.C., Martin Francis Fitzpatrick, L.P.S.I., 10 Charleville Mall, North Strand, to Mary Josephine Gaynor, 112 North Strand, Dublin.

ROGERS—SIMONS.—On January 21, at Petworth Parish Church, Mr. Frank Rogers, chemist, Petworth, to Mrs. Louisa Alexandra Simons.

WISE—WILKINSON.—On January 13, at the Wesleyan Chapel, Colne, by the Rev. Silvester Whitehead, assisted by the Rev. Walter Hudson, of Padiham (brother-in-law of the bride), William Arthur Wise, only son of Thomas Wise, of Gainsborough, to Clara, the youngest daughter of William Wilkinson, chemist and druggist, of Solway Mount, Colne.

Deaths.

EDDEN.—On January 21, at his residence, West Grove, Edgbaston, Birmingham, in his 89th year, Edwin Edden. Mr. Edden, who had practically retired from business, was originally a wholesale druggist in partnership with Mr. W. Metcalfe, at 54 Upper Thames Street. Mr. Edden joined Mr. Metcalfe



in 1843, and the firm became Metcalfe & Edden. On Mr. Metcalfe's death Mr. Edden amalgamated his business with that of Messrs. Langton Brothers & Scott, who were then in business in the same locality. That firm then became Langton, Scott & Edden, and the business was carried on until quite recently.

HEATON.—On January 22, Mr. George Heaton, of Holingbank Terrace, Heckmondwike, aged 60. Mr. Heaton was formerly in business as a manufacturing-chemist, but retired some years ago, dividing his time between Heckmondwike and Scarborough. He held several public offices, and was a liberal contributor to Masonic institutions.

TAYLOR.—On January 21, Miss Mary Elizabeth Taylor, of Ingleside, Whitby. Aged 62. Miss Taylor was the eldest daughter of the late Mr. John Taylor, chemist, Flowergate.

THORNTON.—On January 21, Mr. Edward Thornton, Victoria Road, Exmouth, aged 89. Mr. Thornton was formerly in business as a pharmaceutical chemist at Lyme Regis for fifty years, and had been for some years the Local Secretary of the Pharmaceutical Society. Mrs. Thornton, who was ill at the time, died three days later. Both funerals took place at the same time.

WHITE.—On January 1, Mr. George White, chemist and druggist, Havant, Hants. Aged 74.

A DESCENDANT OF CABOT in the person of John Frasier Cabot, a druggist in Elizabeth, N.J., has recently died. He was born in Philadelphia sixty-three years ago, and was said to be a lineal descendant of Sebastian Cabot, the famous discoverer.

The Chemical Society.

THE block of buildings in our picture is perhaps the most striking feature of one of the main streets of London—Piccadilly—a street through which, day by day, the busy life of London mixes for a moment as it passes with the richest and the most leisured classes of its community. Through the gateway at the centre, as everyone knows, lies the approach to the Royal Academy, but few of the crowds who visit the great picture-show know what the buildings

The Chemical Society has not always been so magnificently housed. It was for many years unable to find any permanently suitable meeting-place till, in 1857, it received a grant of rooms in Burlington House as it then existed. At that time the Royal Academy met in Somerset House, and the Royal, Geological, Astronomical, and other societies occupied rooms there. The growth of the Academy made it desirable to afford more space, and the house

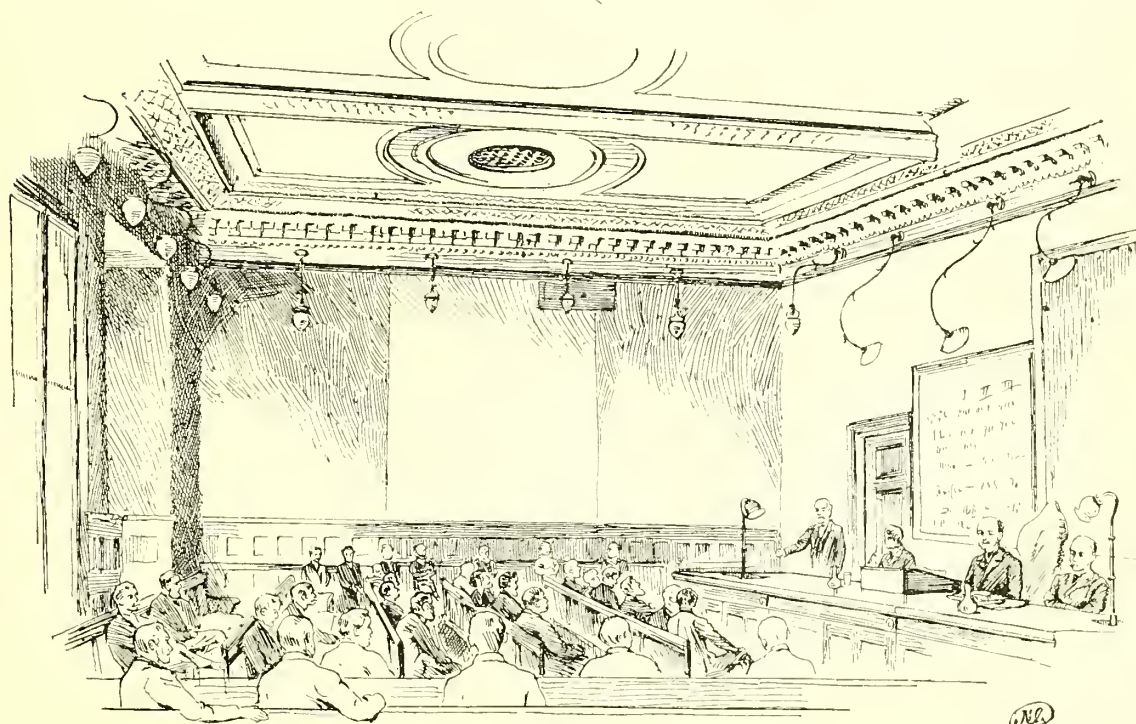


BURLINGTON HOUSE, PICCADILLY.

From "The Queen's London." By permission of Messrs. Cassell & Co. (Limited).

are that surround the quadrangle, who inhabit them, or what is done there. Yet there is little excuse for their ignorance—the names are carved in solid stone over the doors, and one may read "The Royal Society," "The Society of Antiquaries," and so on. The Chemical Society occupies the rooms on the immediate right of the gateway, extending past the first three windows on the ground-floor, the remainder of the frontage on that side belonging to the Geological Society, while the house on the left of the gateway belongs to the Linnean Society.

now occupied by the Academy was handed over to the Royal Society—it being under the obligation of loaning its meeting-room to the Chemical and Linnean Societies, and affording them separate rooms for their offices. The Academy still continued to grow, and, in 1866, it was finally determined to build over the gardens of Burlington House, filling up the space between the present University and Piccadilly. The rebuilding and arrangements took some time, and it was not till 1874 that the Chemical Society entered on its occupation of the present building.



Since that time the only alteration made has been in the arrangement of the meeting-room, which was formerly seated on the plan of a lecture-room, with the table at the east end, instead of, as now, on the north. The change was made in 1893. The room is designed to seat a little over 150 persons. Our artist has endeavoured to show what this room looks like by a sketch at an ordinary meeting.

LAST WEEK'S MEETING

was somewhat sparsely attended for the important business to be transacted. After the customary routine business was got through the PRESIDENT rose to make a statement on behalf of the Council. The country members of the Society desire to take a part in the

ELECTION OF THE OFFICERS AND COUNCIL

without coming up personally, and to this end Messrs. Harden and Hartog, two Fellows teaching at Owens College, Manchester, circulated a memorial among the Fellows, with a letter mentioning other large societies voting in the manner desired. The following is the text of the memorial, which is signed by over five hundred Fellows:—

TO THE PRESIDENT AND COUNCIL OF THE CHEMICAL SOCIETY.

GENTLEMEN,—We, the undersigned, Fellows of the Chemical Society, desire to draw your attention to the great change in constitution which has taken place since the Society was originally formed, and to the desirability of making some alteration in the by-laws, so as to correspond with this change. Whereas the Society was originally composed in the main of chemists living in London or its immediate neighbourhood, and until 1871 was called on its official publication the Chemical Society of London, since that date it has been called by the more general name (given in the Charter) of the Chemical Society, and at the present time the vast majority of the Fellows resides in other parts of the kingdom.

Under the existing by-laws it is, however, practically impossible for this majority to take any share in the government of the Society, since, under By-law V., the vote of each member at the election of officers and Council must be recorded personally, and may not be sent by post.

It is, of course, recognised that a custom has grown up of choosing a certain proportion of the officers and Council from among the Fellows who reside in the provinces; but this practice cannot be regarded as a sufficient remedy for the defect in the existing by-law, and, while we do not wish in any way to express dissatisfaction with the policy of the present or of past Councils, we feel strongly that the Council should be elected by the whole Society, and not by a mere fraction of the Fellows. In this feeling we venture to think that you will concur.

We trust, therefore, that you will see your way to propose to the Society at an early date an alteration of By-law V. in the sense we desire, and have the honour to remain, Gentlemen,

Your obedient servants.

Together with this memorial a letter was sent to the Secretaries, suggesting that it would probably be necessary to obtain a supplemental charter. The Council had some

time ago, it seems, appointed a By-law Committee to consider the question of revision, and the committee had already secured legal advice from Mr. Cozens-Hardy, Q.C., to the effect that the Council have no power to alter the by-laws in the manner desired. The whole question, the President added, is receiving the most careful consideration of the Council, and further legal opinion is being sought.

The list of papers was rather long. The first was on

THE PREPARATION OF PURE IODINE.

By Bevan Lean, D.Sc., B.A., and W. H. Whatmough.

Stas was only able to find two methods of preparing iodine free from chlorine and bromine. One consisted in precipitating by water iodine dissolved in potassium iodide, the other depended on the decompositions of iodide of nitrogen by heat. Perhaps the main difficulty attached to these methods is the desiccation of the iodine. Stas has not stated how he assured himself that his "iodine" was free from other halogens. The authors have observed that when cuprous iodide is heated in air it gives off pure iodine. Now cuprous iodide can be prepared free from chlorine or bromine, either by taking advantage of the different solubilities of the halogen salts of copper when precipitating a solution of a halogen salt with sulphurous acid and copper sulphate, or by preparing iodoform free from chloroform or bromoform and acting on hot copper.

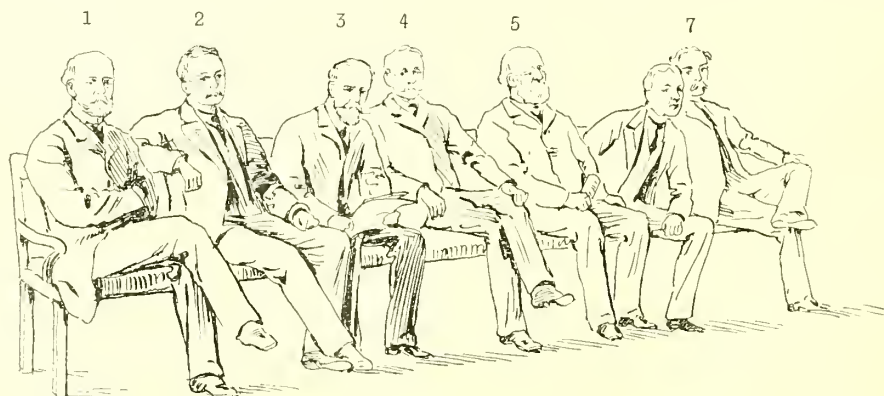
Dr. Scott remarked, in the discussion, on the extraordinary accuracy of Stas, and said that the fact that he determined the ratio of silver to silver iodide as 1:2.175335, while Mavignac found 1:2.175334, would satisfy most chemists of the identity of the substances they worked with.

Mr. Friswell gave an account of an interesting crystalline form of iodine, obtained in a recovery process from methyl iodide by Nicholson's method. The element sublimed at 35°-40° C. to black adamantine rhombic crystals of the size of a cubic millimetre or so. He had hoped to find in them the missing companion element to iodine, but analysis, in the person of Professor Ramsay, said no.

The President confirmed Stas's statement as to the opacity of pure solid iodine, and Dr. Lean briefly replied.

The next two papers read were of slight interest except to the "camphor-chemists." They were "Derivatives of Bromotolylhydrazine," by J. T. Hewitt, M.A., D.Sc., and F. G. Pope; and "Researches on the Terpenes—I. On the Oxidation of Fenchene," by J. A. Gardner and G. B. Cockburn.

The other papers were taken as read, and the meeting adjourned early to allow the Fellows of the Royal Society present to attend the reception at their own rooms. The names of the papers were:—"The Action of Alkalies on Amides," by Julius B. Cohen, Ph.D., and Charles E. Brittain, B.Sc.; "The Formation of Monomethylaniline from Dimethylaniline," "Note on the Aluminium-mercury Couple," both by Julius B. Cohen, Ph.D., and Harry T. Calvert, B.Sc.; "Action of Chloroform and Alkaline Hydroxides on the Nitrobenzoic Acids," by Walter J. Elliott, M.A.



1. Dr. H. Müller. 2. Mr. Horace Brown. 3. Sir W. Crookes. 4. Professor Tilden.
5. Sir J. H. Gilbert. 6. Mr. David Howard. 7. Professor H. Dixon.

A FRONT-BENCH GROUP.

New Companies and Company News.

"KLENE ALLE" SYNDICATE (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To manufacture, sell and deal in cleaning, renovating and disinfecting preparations, chemicals, drugs, soaps, and toilet-requisites. Registered without articles of association.

BIRMINGHAM CARBIDE COMPANY (LIMITED).—Capital 25,000*l.*, in 1*l.* shares. Objects: To acquire from the Thorn-ton-Scarth Automatic Lighting Syndicate (Limited) certain premises in Artillery Street, Birmingham, and certain patents relating to the manufacture of calcium carbide, and to manufacture, sell and deal in carbide of calcium and other chemical substances.

FRENCH HYGIENIC SOCIETY (LIMITED).—Capital 3,000*l.*, in 5*l.* shares. Objects: To acquire the business carried on by Mr. and Mrs. G. Fein, at 6 Conduit Street, W., as "The French Hygienic Society," and to manufacture, sell and deal in perfumes, hygienic-appliances, medicinal-preparations, chemicals, drugs, &c. Gustave C. C. Fein is the sole director. Registered office, 6 Conduit Street, W.

AFRICAN OIL MILLS COMPANY (LIMITED).—Capital 100,000*l.*, in 10*l.* shares. Objects: To enter into an agreement with A. L. Jones, A. Sinclair, W. J. Davey and E. W. McConnan, all of Liverpool, and to carry on the business of seed-crushers, oil boilers and refiners, oil-cake, feeding-stuff and manure manufacturers, and importers of and dealers in palm-oil, palm-kernels, ground-nuts, &c. The first directors are:—Alfred L. Jones, Alexander Sinclair, Wm. J. Davey and Ellis W. McConnan.

ULSTER CHEMISTS (LIMITED).—Registered in Ireland on January 20 by Messrs C. & J. Black, solicitors, 19 Eustace Street, Dublin, with a capital of 100,000*l.* in 10,000 preference shares of 5*l.* each and 50,000 ordinary shares of 1*l.* each, for the purpose of carrying on the business of pharmaceutical chemists, druggists, patent-medicine vendors, drug-merchants, wine and spirit merchants, and to carry out an agreement, dated January 17, made between Mr. Thomas Henry Oldfield, clerk, 7 New Street, Huddersfield, of the one part, and the company of the other. The schedule of businesses acquired includes thirteen firms carrying on business all over Ulster, and of these four are in Belfast and one each in Derry, Cookstown, Dungannon, Armagh, Limavady, Lisburn, Newry, Coleraine, and Ballymena. Directors not less than three nor more than seven, the qualification being ordinary shares for 500*l.* Registered office, 110 Royal Avenue, Belfast. The first subscribers (who take one share each) are:—R. W. McKnight, Carlisle Circus, Belfast, chemist; D. Boyd, North Street, Belfast, chemist; S. Gibson, King Street, Belfast, chemist; W. J. Rankin, New Lodge Road, chemist; J. McCrae, Hill Street, Newry, chemist; H. L. Galbraith, Derry, surgeon; J. Gray, Armagh, chemist; J. Anderson, Lisburn, chemist; S. McKenny, Cookstown, chemist; R. E. Marshall, Dungannon, chemist; J. Acheson, Ballymena, chemist.

PRICE'S PATENT CANDLE COMPANY (LIMITED).—The accounts show that the profit for 1897 is about 77,500*l.*, to which has to be added 6,919*l.*, undivided profit from 1896, making together about 84,400*l.* Deducting the dividend of 15*s.* per share, amounting to 28,125*l.*, paid in September, 1897, a sum of about 56,300*l.* will be available, and the directors recommend that the usual sum of 12,500*l.* be written off for depreciation, that 32,812*l.* be applied in paying a dividend of 17*s.* 6*d.* per share, that 5,000*l.* be added to the reserve fund, and that the remainder—about 6,000*l.*—be carried forward.

Bankruptcies and Failures.

Re WATSON PERRIN WILLIAM BRADSHAW, at Maidstone (Kent), and formerly in business at 196 Norwood Road, London, Analytical Chemist.

THIS debtor, particulars of whose failure appeared in the *C. & D.* on January 7, came up for his adjourned public

examination at the sitting of Maidstone Bankruptcy Court on January 20, before Mr. Registrar G. D. Warner. The accounts showed a gross liability, of 600*l.* with assets estimated to realise 250*l.* The examination was further adjourned.

Re RICHARD BROADHEAD, Commercial Street, Batley, Chemist.

A PRIVATE meeting of creditors took place on January 20, at which a statement of affairs was submitted showing liabilities amounting to 542*l.* 10*s.* 7*d.*, and assets estimated to produce 426*l.* After a long discussion it was decided by the meeting to accept a composition of 12*s.* 6*d.* in the pound, 10*s.* to be paid within a month, and the remaining 2*s.* 6*d.* in six months.

Gazette.

PARTNERSHIPS DISSOLVED.

Blaker, W. C., and Morris, H. C. L., under the style of Blaker & Morris, Bognor, general medical practitioners.

Leather, T., and McLaren, J., under the style of Joseph Leather & Sons, Liverpool, veterinary surgeons and farriers.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Ryland, Alfred, the younger, Birmingham and Worcester, trading as a brassfounder, and practising as a dentist.

ADJUDICATION.

Searancke, Niccoll Frederick, Mitcheldean, Gloucestershire, general medical practitioner.

From the Edinburgh "Gazette."

Creditors of Rait & McNicol, chemists and druggists, 154 and 362 Dumbarton Road, Partick, Glasgow, and John McNicol, chemist and druggist, there, sole partner of said firm, as such partner, and as an individual, will receive a dividend, March 3, in the office of John Wilson & Stirling, chartered accountants, 154 St. Vincent Street, Glasgow.

Deed of Arrangement.

Burton, William Edward, late Greestone House, Lincoln, now of Digby, and Holmes, William Bayles (by attorney), late Elm House, Hamilton Road, Lincoln, afterwards of Rushington, now residing at Johannesburg, South Africa, trading as the Catley Abbey Natural Seltzer-water Company, Catley Abbey, Walsot, seltzer-water dealers. Trustee, Charles W. Witte, Lincoln, accountant. Dated January 12; filed January 19. Liabilities unsecured, 3,556*l.* 13*s.* 1*d.*; estimated net assets, 4,024*l.* 6*s.* 9*d.* Assignment of partnership estate for the benefit of creditors. The following are scheduled as creditors:—

	£	s.	d.
Admiralty & Horse Guards Gazette, London ..	58	0	0
Allen, E. G., Lincoln	510	0	0
Arnold, E. J., & Son, Leeds	14	0	0
Breffit, Edgar, & Co. (Limited), London ..	89	0	0
Cooper & Co., Lincoln	10	0	0
Corsan, J. R., London	63	0	0
Curwen Brothers, Liverpool	16	0	0
Customers' credit balances	18	0	0
Durafort et Fils, Paris	31	0	0
Forman & Sons, Nottingham	19	0	0
Glass-lined Syphon Company, London ..	14	0	0
Great Eastern Railway Company, London ..	35	0	0
Great Northern Railway Company, London ..	14	0	0
Jekyll, Glaisher & Co., Lincoln	28	0	0
Lancashire & Yorkshire Railway Company, Manchester 50	0	0	
Pattinson, F., Sleaford	71	0	0
Peet, H., Manchester	212	0	0
Riley Manufacturing Company, London ..	23	0	0
South, J. E., Lincoln	14	0	0
South Yorkshire Glass-bottle Company, Swinto	68	0	0
Sutton, Sharpe & Co., London	79	0	0
Bankers' claims	2,000	0	0



FOR the first time, we have four classes of supplements in this issue, a fourth being created in consequence of the fact that this number is to go to every chemist and druggist in business in Canada. We therefore have four classes—A, supplements enclosed in every copy; B, those which are not inserted in home copies, but in the foreign and colonial only; C, those which are not inserted in the Canadian copies; and D, those which are inserted in the home issue only. We indicate these by inserting the letter in the parenthetical part at the end of each paragraph, where the pages stated indicate the advertisement-pages between which the insets will be found.

We invite a careful perusal of these insets. They all mean business, and the trade will find it to their advantage to respond to them. It is not every week that business houses can advertise so effectively; in fact, it is only twice a year that we accept circulars, price-lists, and handbills for insertion. This is the first time in 1898—the second will be for our Summer number, on Saturday, July 30. Those who think of having an inset in that number should write to the Publisher, *C. & D.*, 42 Cannon Street, London, E.C., when he will supply full particulars. The subjoined notes are meant to indicate briefly the subject of each inset.

F. B. Bengel & Co. (Limited), of Manchester, start out on a new line of advertising Bengel's food for infants, invalids, and the aged. The cherub who sits on his bike and imbibes Bengel's food the while is one of the smartest things we have seen in this line. A new letter about a Royal baby is printed on the second page by permission of Princess Alexandra von Hohenlohe. We congratulate Mr. Bengel on this last testimonial. It is magnificent. (A, pp. 64-65.)

Thos. P. Bethell, 115 Islington, Liverpool, is the maker of the "Imprimis" quarter-plate camera, which sells at 2s. 6d., and of the "Crown" camera (same size of plate), to sell at 5s. He has inserted a circular about them in the *C. & D.* before, and he does so again, which shows that he has got business from it, and that some amongst our subscribers have done business in them. It is really worth while, in view of the coming photographic season, to get samples of the cameras on the easy terms offered by Mr. Bethell. (A, pp. 32-33.)

Blondeau et Cie., Malden Crescent, N.W., once more insert their price-list, but on this occasion the cover is of an entirely new design, so faithfully reproduced from the original that it is difficult to say that it is executed by a lithographic process. The interior of the inset is the busi-

ness part. It extends to 44 pages. First will be found the firm's terms, then a list of their specialities which can be exported in bond, next pictures of the early species of vinolia—vinolia cream and vinolia powder, and illustrations of many products of the evolution which has gone on without interruption since. Twenty pages are then devoted to vinolia toilet soaps, cakes and boxes being illustrated, following which are more toilet specialities, and eight pages about vinolia perfumes. As a price-list the inset shows in most cases:—(1) Retail price; (2) Minimum selling price; (3) Trade price, and (4) nett price for *l.* worth. (A. Inserted loose.)

Brunner, Mond & Co. (Limited), Northwich, describe the advantages of bicarbonate of soda as a carbonic-acid gas material for mineral-water manufacturers, and by instructions for its use they show how much cleaner and cheaper it is than chalk, &c. This special bicarbonate costs only 10s. per 2-cwt. bag. The company are the makers of the Crescent brand of alkali, and are the pioneers of the ammonia process in this country. (A, pp. 64-65.)

C.A.M.W.A.L., with its "round half-dozen of factories" of aerated waters, has inserted a circular respecting the advantages of "Camwal" water to chemists which is in several respects original, while it is decidedly topical. It will be noticed that the company's factories are in Birmingham, Bristol, Harrogate, London, Manchester, and Mitcham. (C, pp. 64-65.)

Cantrell & Cochrane's aromatic ginger ale is known all over the world. It is made by the firm in Dublin and Belfast. "His Royal Highness" is fond of it, we understand. On the inset there is a facsimile of the label, and notes upon other aerated beverages made by the firm. (A, pp. 64-65.)

Thomas Christy & Co., 25 Lime Street, E.C., again entrust us with the distribution of an artistic circular devoted to "some of T. Christy & Co.'s specialities," which for brevity's sake we name:—"Deco" corks, Pictet's ethyl chloride, "Puro" meat-juice, aqua rosæ ang.; menthol cones; adeps lanæ; witch-hazel extract; "coco testa" liquorice; Petresine (paraf. mol.); liquid petroleum; sugar of milk; Nco-kola; Glandalen; Christia; Christia lint; Morstadt cachets and koseals, with the closing apparatus. (A, pp. 152-153.)

Arthur H. Cox & Co., Brighton, the coated-pill makers, give us an artistic circular printed in colours, which contains a portrait of Mr. Arthur H. Cox, Senr., the

founder of the business, press opinions of the quality of their manufactures, engravings of the styles of bottles in which the pills are put up, a short list of pills that are most wanted, and an interesting description of the factory, translated from a Spanish journal. (A, pp. 184-185.)

Geo. Curling, Wyman & Co., wholesale and export druggists, 58 and 59 Bunhill Row, E.C., well known for their citrate of magnesia and capsules, figure boxes of sulphonal and phenacetin pastilles, which are being largely prescribed now. The firm make all kinds of pharmaceutical preparations, and have acquired a reputation for photographic chemicals. (B, pp. 216-217.)

Durafort & Son, of Paris, whose agent is Mr. E. Schmolle, 42 Gutter Lane, E.C., exhibits the figure of one of his syphons and illustrations of various styles of tops. There is also a section of the new syphon-top with porcelain core, which has the advantage that no metal is exposed to the water, and that the best hygienic conditions are maintained. (A, pp. 64-65.)

Edwards' Harlene Company, 95 & 96 High Holborn, W.C., insert a sample of a chromo-circular, which they offer to chemists for counter-distribution. On the back page of the inset the terms at which they supply "Harlene" to retailers are printed. These provide 20 per cent. discount on 2½ orders. (A, pp. 32-33.)

Elliman, Sons & Co., of Slough, in a small pamphlet entitled, "How my Hunter was Lamed," print a series of eight hunting sketches by John Sturgess, which are reproduced in colours. The sketches are an appropriate commentary upon the value of "Royal Embrocation" to all horsemen. Ellimans' "Universal Embrocation" also gets a look in—illustrations, notes and testimonials emphasising its utility to athletes, and its reliability as a household remedy. (C, inserted loose.)

Ferris & Co., of Bristol, insert an exceedingly effective circular, to the first page of which is attached a chromograph-facsimile of a bottle of "Nepenthe," their trade-marked anodyne tincture. The second page of the inset bears coloured figures of the firm's patent ever-ready caddy and cabinet for surgical dressings and plasters, with which are concise particulars of their surgical specialities. (A, pp. 184-185.)

Goodall, Backhouse & Co., Leeds, London, and Birmingham, exhibit on their inset a reduced facsimile, in colours, of a bottle of ginger cordial (non-alcoholic), upon which a note is printed elsewhere. The facsimile is a wonderfully true representation of the original in all but size. The firm's manufactures generally (druggists' goods of all kinds, Yorkshire relish and household specialities) are mentioned on the back of the circular. (A, pp. 64-65.)

W. Gray & Co., manufacturers of white and blue lead, oils, paints, colours, and varnishes, Hull, quote some of their leading lines, which give a good idea of the goods they deal in, and show how finely they cut their prices in every department. (C, pp. 216-17.)

C. J. Hewlett & Sons, 40 to 42 Charlotte Street, E.C., devote their circular exclusively to export-terms for standardised tinctures in bond, and other kinds of druggists' goods. A full price-list of the tinctures is given, with exact information to guide the colonial or foreign chemist in ordering. It is a matter of common knowledge that the firm have given special attention to this class of trade, and know all the "outs and ins" of it. (B, pp. 216-217.)

Howards & Sons, chemical manufacturers, of Stratford, E., completed their centenary last year, Mr. Luke Howard having joined Mr. Wm. Allen in business in 1797. They notify the event by inserting in this issue an artistic

pamphlet containing portraits of the founders and their successors, including portraits of the present partners, as well as views of their works; to which is added a graphic and far too modest history of the firm, who, we need scarcely say, have been identified with the manufacture of quinine since its discovery, and have earned a world-wide reputation in the production of medicinal chemicals generally. (A, inserted loose.)

Jewsbury & Brown's table-waters have brought us a perfectly original inset. Original in respect to the design, we mean. On the front page is a picture of the doorway of their offices and factory on Ardwick Green, Manchester. "Kindly walk in and place your orders" is the inscription to it. On the fourth page is an engraving of the gateway of the factory, with delivery-van in the exit portion. "Your goods despatched immediately on receipt of order" is the inscription here. It is neat, and we like the open letter between, because it does not say a word too much. (C, pp. 64-65.)

Jeyes' Sanitary Compounds Co. (Limited), 64 Cannon Street, E.C., also insert a pretty circular. On the front page are facsimiles in colours of their disinfectants, soaps and toilet preparations. Then follow price-lists of their manufactures, including creoline products and "Branal-cane," the specific for throat affections, which is further depicted on the last page in chromograph facsimiles. (A, pp. 64-65.)

W. Kühnenthal, 36 Basinghall Street, E.C., agent for the Rio Chemical Company, the Sultan Drug Company, Peacock Chemical Company, and the Od Chemical Company, inserts a list of the medicinal specialities manufactured by each of them, which list may be "spotted" by the Eagle and "Spor" design on the front. The properties and uses of each of the specialities are described. (C, pp. 152-153.)

Leath & Ross, 9 Vere Street, Oxford Street, W., have made their orange circular about homœopathic medicines such a familiar *C. & D.* inset that one would miss it. The circular gives illustrations and particulars regarding four different kinds of counter showcases of homœopathic medicines which they give to customers, although the wholesale prices for the medicines are uncommonly low. (C, pp. 184-185.)

Mawson & Swan, Newcastle-on-Tyne, who are amongst the oldest, if not the oldest manufacturers of photographic collodions, dry plates, &c., in the kingdom, insert a list of the different kinds of plates which they make, stating the particular classes of work for which they are suited. The styles of packages are also illustrated on one of the pages. (C, pp. 32-33.)

May, Roberts & Co., Clerkenwell Road, E.C., again insert their half-yearly illustrated price-list of druggists' sundries, proprietary articles, packed goods, perfumery, toilet-requisites, &c. We notice in glancing through the list that several new features have been incorporated and many alterations effected. To begin with, Mr. Gould, the artist, has given effective pictorial expression to the firm's policy—"No Travellers." Next we observe a note upon "Puso!," an iodoform-substitute for which they are sole wholesale agents; then come the eighty pages of a sundries catalogue, the last two being devoted exclusively to I.R. stamps. The list of patent medicines and proprietary articles occupies forty-six pages, and is printed on pink paper. P.A.T.A. articles and those saleable by chemists only are indicated. Particulars of new sign-markers, a green list of packed drugs, perfumes, toilet and household requisites, complete the inset, which is inserted loose in all except the Canadian copies.

Maypole Soap Company (Limited) advertise as brightly as the Maypole soaps dye. Their inset this time seems to us as good as ever, which is saying a great deal. Supplies of the attached handbill may be obtained on application, and while one is at it the detachable order-form may as well be filled in. The company's address is 98 and 99, High Holborn, W.C., and their Australian agents are Messrs. Collin & Co., 562, Bourke Street, Melbourne. (C, pp. 32-33.)

McKesson & Robbins, of New York City, insert a larger list than usual of their gelatine-coated ovoid pills and granules capsuled with gelatine. The list is revised to date. In addition the inset contains notes and illustrations of tartarilithine, blenostasine pills, pyrozone solutions and atomiser, compound stearates, the pulverlator, oleo-stearate of zinc, and the aseptic injector. (A, pp. 32-33.)

F. Newbery & Sons, King Edward Street, E.C., insert a price-list of popular counter-specialities and other saleable articles for retail. They also illustrate some of their good lines in perfumes ("St. Paul's" brand). On the first page of the inset is a list of the goods of which they are proprietors or special agents, and some particulars about their marvellous catalogue. (A, pp. 32-33.)

A. & F. Pears (Limited), 71-75 New Oxford Street, W.C., return to that most popular of their advertisements, the "Yon dirty boy" statuette, of which they give a good reproduction on the flat, and offer a replica of the original in terra cotta, with an opening order for 50% worth of Pears' soap. (A, pp. 32-33.)

Robinson & Sons (Limited), of Chesterfield, devote their circular to an enumeration of their manufactures of surgeons' supplies, such as lint, cotton-wool, bandages, and all kinds of aseptic and antiseptic surgical dressings; while on the last page of the inset are figures of various forms of cardboard boxes which they manufacture. (A, pp. 184-185.)

Sanitas Company (Limited), Bethnal Green, E., have a catching headline to their price-list of "Sanitas" preparations. Several engravings of the specialities are given—viz., of Sanitas fluid, fumigator, and embrocation, and of Kingzett's sulphur candles. (A, pp. 216-217.)

Andreas Saxlehner, of Budapest, calls the attention of the trade, by his circular, to the merits of Hunyadi-Janos water, of which he is the sole proprietor, and, after describing the source of the water, and its chemical and medicinal properties, shows the valley which is the source of the water. (C, pp. 64-65.)

Spratt's Patent (Limited), Bermondsey, S.E., make dog-cakes, dog-medicines, and everything that household pets need in the way of food and medicine. Their inset has prices of these, and contains a picture of a fine black-and-tan, and a facsimile of a box of their dog-soap. The front page has a picture of the Cross of Honour, which was awarded to their products at the Brussels Exhibition. (C, pp. 216-217.)

Stallman & Fulton, Dunster House, Mincing Lane, E.C., show a box of their compressed rhnbarb. This is fine selected rhnbarb, ground and compressed into fingers, squares, rounds, &c., which are much handier for the pocket than the old-fashioned style. Their circular also refers to the "National Brand" of sugar and milk, and their chemically pure aloin. (C, pp. 152-153.)

Triticine (Limited), Castleford, Yorks, offer to send to any chemist on application a parcel of pamphlets, similar to the sample which is attached to their inset, and a sample tin of the triticine. This infants' food yields a sure profit of 25 per cent. (A, pp. 64-65.)

Wm. R. Warner & Co., of Philadelphia, insert a complete

alphabetical price-list of their sugar-coated soluble pills. The list also includes a brief description of Dr. C. W. Dennis's new hypodermic syringe, which is aseptic and unbreakable. We have heard medical men speak of it highly. "Tono Sumbul" and Warner's effervescent and effervescent tablets are also described, and as a preface to the list there are three notes on the solubility of Warner's pills, these forming a complete rejoinder to the "Pills under the Hammer" assertions. (C. Inserted loose.)

The White Oils Company's (Wellington, Somerset) inset marks a new departure in veterinary medicine. Whilst supplying a good article upon advantageous trade terms, they offer to put the name of the purchaser of six dozen and upwards on the labels free, if desired. The company are the manufacturers of Pine's well-known specialities. (D, pp. 216-217.)

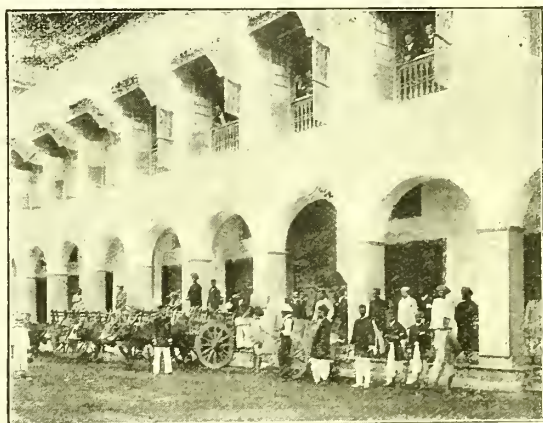
Wright, Layman & Umney, wholesale druggists and manufacturing-chemists, 48 and 50 Southwark Street, S.E., give an idea of what their premises are like, appending to each of six large engravings a short and concise description of the department illustrated. The latest department added for pills and tablets is shown on the last page of the inset. (A, pp. 152-153.)

A. & M. Zimmermann, 9 and 10 St. Mary-at-Hill, E.C., figure on their inset the "Alformant" disinfecting-lamp, and give brief particulars of orexin preparations, suppos. hemorrhoidalia, anusol, and the following special chemicals made by Schering:—Eucaine hydrochloride, cocaine hydrochloride, argentamine, caffeine chloral, chloralamide, diphtheria antitoxin, piperazine, kavalose, phenocoll hydrochloride, sodii salicylas, acid. salicylic, sanose, and urotropine. (C, pp. 216-217.)

"INDUSTRIAL POISONING" is the term applied under the Factory Acts to cases of poisoning which occur in the course of manufacture. There were 1,050 cases in 1896, all but 20 being lead-poisoning.

SHEEP-DIP.—The Government of New Zealand has issued a return for the year ending April 30, 1897, which gives the names of all the sheep-owners in the country, with the number of sheep in their possession in 1896, and again in 1897. The *C.D.A.* suggests that sheep-dip owners should get this in order to circularise the farmers. The return sells at 3s. 6d.

A BOMBAY DRUG-STORE.—Retail and wholesale druggists in India have palatial premises. This picture is one of



"Saccharin House," Apollo Street, Bombay, the premises of Bertie-Smith & Co.'s wholesale and export drug-stores, who are agents for THE CHEMIST AND DRUGGIST in Bombay.

A Short Catechism.

BY EDGAR THORNE.

When a rooster keeps you awake half the night, what is he? A *cro-cus*.

What will you call a walking-stick owned in partnership with another? A *co-caine*.

What is a very small horse? A *pona*.

What are puff- which appear on the legs of horses? They *argols*.

What is a broom-handle in the hands of a crabbed woman? A *fustic*.

What will be the result if you strike your father with a poker? It will cause your *papain*.

What town may whales be said to live in? *Spermaceti*.

What may a butcher's stable be used for? To keep a *stearin*.

When you resolve to curb your violent temper, what confession should you make? I have a *terebenc*.

What country would be a good one to dwell in? *Brazilwood*.

What is the choicest part of a beef? A *loin*.

If you decorate your donkey with flowers, what might it be called? A *blue mass* (bloom ass).

Which is the most sedate flower? The night-blooming *cereus*.

Why is a horse heavier when you lead him to water than when you turn him out to pasture? Because then he is *lead*.

When your watch and clock stop running, of what are they deficient? They *lactic*.

How can a prize-fighter win the championship? He must *betol* others.

When the father, mother, and children have the measles, they are *allgt*.

[We wish to explain that this is pure American, from *Meyer Brothers' Druggist*, and we have reason to believe that the trouble arose through some *C. & D.* conundrums having slipped over the herring-pond and infected somebody.—*Ed. C. & D.*]

Galen Duplex.

(With salaams and apologies to Mr. Kipling.)

As I was a-walkin' along the street when the theatre shut last night,



I spied a winder a-blazin' red, and strolled in the shop for a light;

The boss was a-sweatin' an' workin' like mad, an' I sez to 'im, "Oo are you?"

Sez 'e, "I'm a chemist, a qualified chemist, a toff an' a shopman too."

Now 'is work begins at 7 A.M., and his work is never through;

'E isn't exactly in ornery trade, nor of the professional crew;

'E's a sort o' pill-makin' harumfrodite, a toff an' a shopman too!

You meet 'im all over the British Isles, a-sellin' all kinds o' things,

Like 'baccy, an' packets o' tea, an' paint, an' sticky fly-papers, an' strings;

'E sleeps with a night-bell beside 'is 'ead, an' it wakens 'im up in a stew

To find 'e's a chemist, a nocturnal chemist, a toff an' a shopman too!

For there isn't a man on top o' the earth gets sich potterin work to do—

The public rail at 'is profits big, an' compare 'im to Shakespeare's Jew,

While 'e earns a little, an' slaves a lot—a toff an' a shopman too!



E gobbles 'is breakfast an' wolfs 'is lunch, with penny-worths in between



O' "Blaud's" for anæmic nurserymaids, and four-penny "health salines"; An' when colic or stum-mick ache twists us up, an' we dunno what's best to do,

We run to the chemist, the courteous chemist, a toff an' a shopman too!

'E thinks for us, an' pre-scribes for us, an' patches us up like new

By giving us chlorodyne, fifteen drops, or scidlitiz an' good old "blue"—

'E's a pestle-an'-mortar Samaritan, a toff an' a shopman too!



To keep your 'ead in a counter crush, with customers all about,

Is bad enough when they're fussy old maids, or peppery swells with gout;

But to stifle cuss-words o'er a creosote-pill is a toughish pellet to chew;

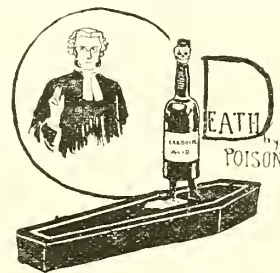
An' 'e does it, the chemist, the dignified chemist, a saint an' a shopman too!

It gives 'im fun ere 'e's well begun, an' it's nasty to sniff an' view,

But 'e makes an immaculate spherical pill with a coating no smell comes through—

'E's a patient, artistic philosopher, a toff an' a shopman too!

As a public we think we are wide awake, an' no doubt we're as smart as can be,



But once in a while we get poison vile (which I 'ope it won't appen to me);

An' it makes you think better o' Pestle & Co., an' the work they 'ave got to do.

When you think o' the victims o' fiendish carbolic, tortured an' murdered too.

Law-makers! there isn't no room for doubt, it's proved to be plain an' true,

That whether for lotions, or toothache, or drains, it ought to be scheduled by you,

An' carefully sold by the registered chemist, our guardian an' shopman too!

DUNALBA. (7/87.)

Trade-Marks Applied for.

Anyone who objects to the registration of a trade-mark must address the Comptroller-General, Patent Office, Chancery Lane, W.C., within a month of the date of publication.

(From the "Trade Marks Journal," January 19, 1898.)

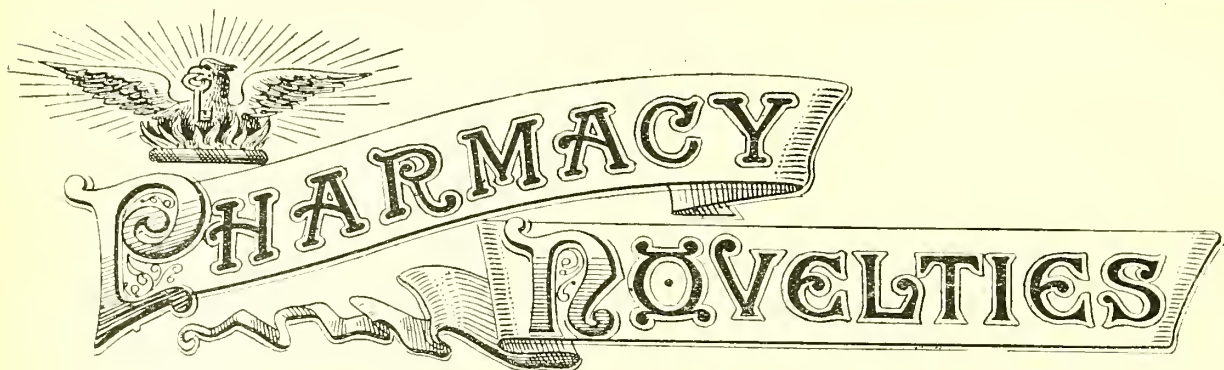
"NIOECENE" OINTMENT; for human use. By Jos. Hatfield, 8 Junction Terrace, Hulme, traveller. 207,516.

"UNCLE BOBS" MEDICINAL-LOTIONS; for human use. By R. Greenhalgh, 11 High Street, Blackburn, hairdresser. 209,094.

"MOVINE" and "MOURTABS" for all goods included in Class 42. By Armour & Co., 59 Tooley Street, S.E., packers and merchants. 210,070 and 210,073.

Device with Chinese characters; for perfumery. By J. & E. Atkinson (Limited), 24 Old Bond Street, perfumers. 208,536.

"MOUSMI"; for perfumery. By W. Gossage & Co. (Limited), Widnes, soap-manufacturers. 209,939.

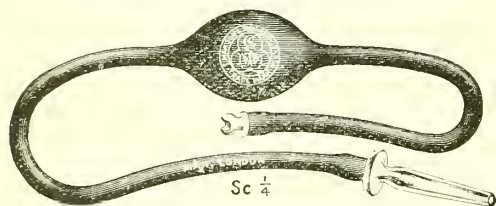


NON-ALCOHOLIC GINGER-CORDIAL.

AN excellent shilling's-worth is offered by Messrs. Goodall, Backhouse & Co. this week—viz., a ginger-cordial free from alcohol, and put up in large bottles (six to the gallon) with stopper. It is a beautiful preparation, attractively got up, and delicious either "neat" or diluted. As an original and popular line it is well worth looking after, and the trade can get supplies from headquarters, in Leeds, from 54 Southwark Street, S.E., or 5 Carr's Lane, Birmingham.

A CHEAP ENEMA.

TWENTY-ONE shillings a dozen, and guaranteed British made. These are the two principal features of a new ball-enema syringe which Messrs. S. Maw, Son & Thompson, 11 Aldersgate Street, E.C., have just introduced. It is made



of a good quality of red rubber, enamelled in black, and each syringe is packed in a cardboard box, with vaginal pipe and shield. It is a strong article, and well finished. Messrs. S. Maw, Son & Thompson make no secret of the fact that they have priced the syringe at a low figure "in order that it may, if possible, drive away cheap and unreliable German syringes from the market."

MEDICINAL WINES.

MESSRS. BEAUFOY & Co., the well-known vinegar and British-wine manufacturers, of South Lambeth, S.W., are now putting up coca and quinine wines for the drug-trade. Both are excellent preparations, the quinine wine conforming to the requirements of the British Pharmacopoeia: it does not deposit, and is put up in good taste. The coca wine contains all the extractives of the coca-leaf, has a full coca flavour, and is really a medicinal wine, although the usual licence is required for its sale. We like the way in which it is put up—viz., in wine-bottles with an attractive label, each bottle being enclosed in a carton.

CADETT'S SPECTRUM PLATES.

MESSRS. CADETT & NEALL (LIMITED), Ashted, Surrey, are experiencing an increasing demand for their new spectrum plate, which they claim is the only truly orthochromatic plate in the market, and the only one that will stand Captain Abney's test with yellow light filter. These plates are especially useful to workers of colour processes, for photographing flowers and patterns and other purposes, where long exposure can be given. There is at present no

safe light whereby these plates can be developed, so that total darkness is required until development is nearly finished, when a moderate amount of dark-room light is cautiously admitted. The "Lightning Plate" of this firm, "the quickest in the world," is perhaps the best quick plate known to dealers. Messrs. Cadett & Neall make a special point of supplying dealers with their plates and papers in preference to selling direct to amateurs, and, being members of the Platemakers' Association, their goods bear a good profit.

"A SEPARATE CURE FOR EACH DISEASE."

THAT is Professor Munyon's motto. When he came here, six months ago, nobody knew anything about Munyon's remedies. Who does not now? We notice from the first semi-annual report which has been issued, that during that time the professor has received testimonials from about 50,000 grateful and relieved patients in the United Kingdom. We have been asked to inspect these letters, but so far have not had the courage to tackle the job. The main thing for chemists to note is that the remedies are homœopathic preparations carefully selected for the specific classes of troubles. The Munyon Company maintain the minimum prices of the preparations, so that the retailer is assured of a good living profit, and the remedies are not only extensively advertised in the newspapers, but the company have constantly on the road a dozen representatives who make a house-to-house distribution of samples of the medicines and literature respecting them. Nine million vials of the medicines have been sold in this country during the past six months—i.e. about half-a-million pounds' worth! This is a record, and the curious point about it is that we have not heard of any fall in the sale of medicinal staples, which proves once more that the public likes physic, and will buy it, like other goods, if put before them in an attractive way. The company inform us that they are glad to change unsaleable remedies in marketable condition for saleable ones at any time.

HERBS IN PACKETS.

MR. GEORGE THWAITES, of Stockton-on-Tees, sends us several samples of his packed herbs which he is offering to the trade through our columns. What strikes us chiefly about the packets is their comparatively large size for a small price, and there are a number of compounds—e.g., sarsaparilla and hop-bitter—which can be used for making either a medicine or brewed beer, which is a good idea. Every packet has full directions printed upon it. We find the herbs to be in all cases of good quality, well picked, and ready cut for infusion. Mr. Thwaites puts up a full line of compound herbs for bronchitis, liver, &c., and he has several special preparations, one of which—"composition tablets"—is exceedingly popular. This is a soluble tablet (really a candy), containing the active constituents of composition essence, and it sells at 1d. In working-class districts there

should be good business done in these tablets during the winter months, "composition" being so well liked as a stimulant.

NEW CACHETS.

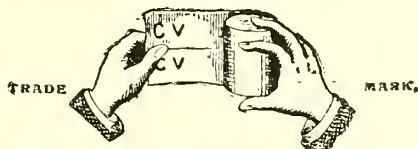
Mr. MAX SCHLIEPHAK, who has had personal experience in the drug-trade in Belgium, France, Germany, Hungary, Denmark, Sweden, and Switzerland, has recently started an International Pharmaceutical Agency at 90 Victoria Street, Westminster. His object is to introduce English goods into foreign countries, and *vice versa*. Mr. Schliephak sends us samples of cachets which he is prepared to supply. He can furnish any make of cachets. The samples are good, and can be had plain or with any lettering printed upon them.

A CLUB AT A CHEMIST'S.

"DRUG TOPICS," the little monthly which Messrs. McKesson & Robbins, of New York, publish, comes to us this week in a new dress and with new features. An amusing thing in it is about a "Tartarilithine Club" (tartarilithine is a gout and rheumatism speciality made by McK. & R.). "The club was formed by one of the leading pharmacists in the North-west, who was cured of rheumatism by taking tartarilithine. The members meet at his store every day for the purpose of taking the mid-day dose. Each member has his own bottle, labelled with his name, and these are arranged on a shelf in the corner of the store. At last accounts the membership was gradually decreasing, owing to the fact that the members were no longer able to comply with the requirements for membership." This last sentence is good.

"EUREKA" CREPE VELPEAU BANDAGE.

SOME months ago we pointed out the great advantages which crêpe bandages have over indiarubber ones in the treatment of varicose veins, or in other cases where elasticity, combined with perfect porosity, is requisite. Mr. Vincent Wood, 11 Albion Place, Blackfriars Bridge, S.E., now sends us samples of such material, which he has introduced under the above name. The material is extremely light and contains absolutely no indiarubber, yet is wonderfully elastic,



stretching to a little more than double its normal length. It thus gives good support and pressure. The material is made into bandages 2 inches, 2½ inches, and 3 inches wide, in two qualities, to retail at 1s. 3d. to 2s. 6d. each, and into abdominal binders. Mr. Wood puts the name of the retailer on the wrappers and handbills when gross quantities are purchased.

PACKED SPECIALITIES.

MESSRS. LORIMER & Co., Britannia Row, N., send us samples of a few of the counter-specialities which they are advertising this week, in order that we may say what we think of them. In the first place we may note a distinct advance in the style of putting up. The toilet-preparations named below are all elegant and should sell well, while the others are distinctive and good:—

"HAIR-CURLING FLUID."—A 4-oz. opal bottle with sprinkler, made by Patti Père et Fils, Paris. A good fixer.

GIRAUD'S SAPONACEOUS OR SHAMPOO POWDER is put up in 1s. boxes containing seven 2d. packets.

"VELO" CREAM AND "VELO" SKIN-LOTION.—Two distinct preparations; the former is a white emollient emulsion, the latter a balsamic and stimulating fluid.

"KAMADAN," a "much-prized hair-stimulant used in the harems of Persia and the East." This is an interesting statement. The lotion is nice.

PILE-REMEDY to retail at 1s. 1½d. per box, which contains cachets of an alternative and laxative medicine, and a tube of ointment. The latter would be the better for a rectal nozzle.

NELSON'S FLUID-BEEF is put up in 2-oz. amber-coloured square bottles, and one teaspoonful of it makes a cupful of palatable and strengthening beef-tea.

These make good saleable lines for quick counter trade.

VIBRONA

MESSRS. FLETCHER, FLETCHER & Co. have just received an official communication from the French Minister of Commerce authorising the importation of Vibrona into France. This will enable chemists on the Riviera and other southern health-resorts to supply the requirements of English and American visitors. The firm, we notice, have embarked on an extensive system of advertising Vibrona by columns in the London dailies, quoting medical opinions of the "ideal tonic wine." Perhaps the recurrence of influenza is responsible for a considerable impetus in the demand for Vibrona. From an advertisement in this issue it will be seen that the wholesale terms on which Vibrona is supplied have been revised, and we are informed that orders for less than original cases are now filled by the wholesale agents, Messrs. Wm. Edwards & Son, 157 Queen Victoria Street.

ROYAL COURT HAIR-DYES.

A FIRM trading as Marion & Co., at 13 Bury Street, Chelsea, in which at least one qualified chemist is concerned, are bringing forward for chemists' sale a series of hair-dyes of all the popular shades. The dyes are guaranteed to contain no injurious ingredients, and are stylishly put up. The firm are making a really tempting bid for chemists' support by preparing to supply them with cards on which are mounted specimens of locks of hair dyed to the various tints produced, and by assuring them a profit of cent. per cent. Arrangements will be made so that every chemist accepted as an agent shall have a constituency of 10,000 possible customers around him, and those agents who can take a special quantity will, we understand, be supplied with still more effective advertising aids.

FOR LADIES ONLY.



Designed by Mr. Fred Reynolds, and sold by Reynolds & Branson, Leeds.

LIPTON'S NEW BEEF-PREPARATIONS.

SIR T. J. LIPTON, City Road, E.C., is placing an extract of beef and fluid-beef upon the market, and as what Sir T. J. Lipton does is generally done in a thorough manner, we may expect to hear a good deal of these preparations. They are prepared in London, at the firm's own factory, from fresh ox-beef. The fluid-beef is put up in flat bottles, and is sufficiently liquid to be pourable from the bottle. We find the flavour good, and the albumen-content high, and that, when mixed as directed, an invigorating and nourishing beverage results. It is put up in five sizes, the 2-oz. size selling for 9d., and the 16-oz. for 4s. The extract of beef is put up in jars in the usual manner. It is light brown in colour, and has a fine flavour. It is recommended for making beef-tea, and for flavouring-purposes in the culinary art. There are five sizes also of this, the retail price for 2-oz. jars being 11d., and for 16-oz. 6s.

WAXES.

THE purified beeswax sent out by Mr. Theo. Leonhard, Paterson, N.J., can be relied upon for genuineness, as he

refines the yellow and bleaches the white without chemicals. It will be noted that Mr. Leonhard supplies also a "blended wax" for laundry-purposes.

ADVERTISING IDEAS.

A MOST distinct calendar has been issued by Messrs. Oldfield, Pattinson & Co., of Manchester. The days of the month are printed in prominent white block letters on a blue ground, which can be seen several yards away. We have also received a copy of the firm's Monthly Prices Current, in which we observe several novelties of arrangement.

* * * *

"THE Lofoten Islands and their principal products" is the title of an elegant pamphlet published by Messrs. Parke, Davis & Co., of Detroit, and 214 North Audley Street, W. It is lithographed throughout, and contains characteristic Norwegian coast and fiord scenes, each being described. The cod-fisheries are also illustrated in a series of pictures, one of the most striking being a pile of cod-fish heads apparently 25 to 30 feet high. A description of the manufacture of cod-liver oil completes the pamphlet, and we may say that as a frontispiece the pamphlet includes pictures of sound and diseased cod-livers, which are remarkably true to nature. The pamphlet is a delicate advertisement for the firm's oil and egg-emulsion thereof, which have recently been all the go in the United States.

* * * *

MR. ARTHUR OGLESBY, Barnsley, sends us a batch of circulars, which he says he has "let loose this January." They refer to his general chemist's business, to his dental business, and to his optical business. The advertisements are well printed and are readable. The dentistry ones are not quite so professional in tone as we think they ought to be. One—a well-written one—is headed, "We take pains to spare you pain." There is a little tendency to the jocular about this which strikes us as out of place. Probably, however, it brings business; if so, that is all that is wanted of it. The optical advertisements are better. We quote the following, as we think it a specially good handbill:—

FEW PEOPLE HAVE EYES ALIKE.

Fully nine-tenths of those who wear glasses have different vision in each eye. Sometimes it is a decided difference, in others only a slight variation. A careless examination will fail to bring out this defect—the same lenses will be adjusted to both eyes—and headache and eye strain that medicine fails to relieve are the result.

We test each eye *separately*, select the proper lenses, and adjust glasses to suit both eyes. We make, to order, glasses of all shapes and sizes to restore every defect of vision. People that have been almost everywhere else and tried to be fitted with glasses, and never had a pair just right, come here and have them made *exactly right* the first time.

Frames in all the leading styles.

Genuine Scotch pebble lenses.

ARTHUR OGLESBY,
Expert Optician,
Barnsley.

* * * *

MESSRS. JOHN SANGER & SONS, 2 Winsley Street, Oxford Street, W., are sending out a wall-calendar, with a pocket for their monthly supplements. It has their discount-table printed on the back, and a convenient reminder at the 10th of each month that monthly accounts are due.

THE annual dinner of the employes of Messrs. Baiss Brothers & Co. took place at the City Arms on Friday evening last. There were present Messrs. A. Baiss, S. S. Baiss, W. A. Baiss, and G. G. Baiss, also Mr. Clark, Mr. Jayne, and Mr. Welch, and practically all who are connected with the business. Amongst the visitors we noticed Mr. W. C. Allen, Mr. A. Lambert, Mr. S. Lambert, and Mr. Robinson. After dinner the proceedings took the form of a smoking-concert, which was exceedingly enjoyable, in fact, the whole affair was a complete success.

Diary Advertisements Competition.

ONCE more a plebiscite of our readers has been taken on various questions connected with the advertisements which appeared in THE CHEMISTS' AND DRUGGISTS' DIARY for 1898, and our numerous advertisers have had to submit to a pillory of opinion as to what their customers think of their various and varied efforts at publicity in our pages. Judging this competition is no light matter, and were it not for a few gleams of humour, sometimes unconsciously, glimmering around we might never get through the herculean task we had set ourselves. One youngster competes, giving his age (12), but, alas! we refuse to be cajoled into looking with a less stern eye at his votes than at those with more mature judgment in the matter of advertisements, and he must only take his chance along with the rest. An old friend bursts out into poetry as follows:—

Dear Mr. Editor,—Once more I came to stay
A month or two at balmy Colwyn Bay.
My DIARY to Ashton has been sent,
But, that I might read each advertisement,
Good brother Lloyd lent his for me to explore,
And, surely, it contains a wondrous store!
After some hours I answered every question—
'The study truly sharpened my digestion!
So herewith six answers I append,
Remaining still, as heretofore, your friend
And constant reader of the C. & D.—
Which, like glad sunshine, oft cheers W.B.

This report deals with the home votes only, the time for deciding the foreign votes not having arrived; these we shall deal with in the near future.

THE QUESTIONS

asked were as follows:—

1. Whose advertisement is best calculated to promote business?
2. Which illustration or design do you consider most attractive?
3. Which advertisement, occupying a page, do you consider the best?
4. Which advertiser, who has less than a page, utilises his space to the best advantage?
5. Vote for the proprietary article advertised in the DIARY, (medical or of any other character) which has your best wishes.
6. Which is the most happily-named article advertised?

and were propounded with the idea of sounding the retailers' ideas on various questions connected with

ADVERTISING AND THINGS ADVERTISED.

The first question gave an overwhelming "top vote" to Messrs. Burroughs, Wellcome & Co., and, as the following figures show, no other advertiser reached treble figures. "Daisy," the second on the list, seems to enjoy an enviable popularity throughout the set of questions, while Kemp's price-list and Bowers' striking advertisement again score well:—

Burroughs, Wellcome & Co. 259	W. Kemp & Son ...	71
Daisy Powders ... 76	Bowers Brothers ...	32

We refer later to those which obtained smaller numbers of votes.

THE MOST ATTRACTIVE ILLUSTRATION OR DESIGN.

This is a question upon which there is expressed a marvelous diversity of opinion, and when we consider the great number of really effective designs to be found in the DIARY pages, and the different tastes with which, in the nature of things, human beings are endowed, it is not to be wondered at. Messrs. Stevenson & Howell's design of a branch of lemon-tree, on page 9, secured the top rung of the ladder with 78 votes, Day's "Oil of the Night," with its imps of darkness picturesquely dotted about, coming very close with 71, whilst Mawson & Swan tot up a total of 60 with their very pretty design on page 103, referring to their photographic plates. Bowers Brothers' design takes the fancy of 52 readers, and it is perhaps consolatory to several advertisers to know that, if not at the top of any one voting, they keep

Lockyer, 106
 Lousdale, 104
 Lorimer, 193
 Lynch, 11
 Mackenzie's Soap, 524
 Mackenzie's Smelling-bottle
 634
 Marshall's (Lim.), 80
 Martin's Bandages, 578
 Mason's Extract, 59
 Matto Chain, 591
 Maw, 25-31, 581
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THE PRIZE AWARD.

None of the competitors gave answers to all six questions correctly. Five answered five questions right, viz. :—

Mr. J. N. Moffitt, 117 Crumlin Road, Belfast.
 Mr. E. G. Perfect, 72 Craven Park Road, Harlesden, N.
 Mr. W. Pilkington, 11 Market Place, Buxton
 Mr. H. M. Robin, 17 North Bridge, Edinburgh.
 Mr. F. G. Walton, 77 Parkgate, Darlington.

To these we are sending a guinea each.

The following seven gentlemen gave four correct answers, and will each receive 7s. 6d. The remainder of the money award we are reserving for the foreign section of the competition :—

Mr. B. S. Campkin, 74 Mill Road, Cambridge.
 Mr. T. J. Clarke, 4 Mill Hill Road, Derby.
 Mr. A. Morgan, 1 Church Street, Darlaston.
 Mr. H. G. Morris, Thame.
 Mr. P. E. Pearson, 79 Abbey Road, N.W.
 Mr. A. Porweb, 26 Fisher Gate, Nottingham.
 Mr. W. H. Kingland, 20 Ashfield Road, Ranelagh, Dublin.

Forty-six competitors got three answers right, 126 were correct in two, and 199 made one guess aright, whilst a surprising number were out of the reckoning altogether; but our purpose has been fulfilled—advertisers have some assurance that their advertisements have been searched by prospective customers, and our readers have at least learnt the best places to buy most of the very great variety of stock which they deal in, to the mutual advantage of wholesaler and retailer.

Amber in Medicine.

WE are reminded of the use of this fossil gum as a drug by a reference made in a new and charming book treating of amber as a gem, under the title of "The Tears of the Helidides; or, Amber as a Gem," by W. Arnold Buffam (Sampson Low). The general tenor of the book, interesting though it is, does not come within our province to discuss; but the following statement made by the author brings to our mind that the old writers on drugs had a high estimation of amber, though we are surprised to know that it is still used therapeutically. Here is the paragraph referred to: "The ancients employed amber as a medicine, and it is still prescribed by physicians in France, Germany, and Italy. Several chemists in Paris keep it constantly in stock. It has been worn by ladies and children from time immemorial as an amulet, sometimes carved into *amphora*, and has been pronounced of service either taken internally or worn round the neck. Callistatus gave the name of *Chryselektron* to amber of a clear golden colour, which, worn round the neck, cured ague; ground up with honey and rose oil it was a specific for deafness, and, with Attic honey, for dimness of sight." But to come to more recent times, Pereira says in the third edition of his "Materia Medica," published in 1853, that amber was not even then employed as a medicine in this country, but that "it was formerly used in chronic catarrhs, amenorrhœa, hysteria, &c., and was given either in the form of a powder in doses of ten grains to a drachm, or in that of tincture, a formula for which is contained both in the French Codex and Prussian Pharmacopœia."

Referring to Pomet, who was "Chief Druggist to the late French King Lewis XIV." and who wrote "A Compleat History of Druggs," a translation into the English language of which appeared in 1725, we find a good deal of space given to amber, from which we quote the following quaint and interesting paragraphs:—"What I say may perhaps seem strange to those who don't know the great use there is of amber in China and amongst the savages, as well as in Europe; but the greatest consumption of it is in Austria, Germany, and Poland, and in the neighbourhood of Venice, and the Venetians were the first that brought it into such a vogue and fashion thereabout, there being few people in Lombardy, or all along the Po, but wear amber necklaces, believing they keep 'em from quinzies and other ill effects of the neck and throat to which they are very subject by reason of the bad waters they are forced to drink in those parts. Besides the great use of yellow amber for trinkets, &c., 'tis of some use too in medicine, not only to powder, but to draw a tincture, a spirit, volatile salt, and an oil, and to make a varnish with spirit of wine."

"Amber," he continues, "is powder'd upon a porphyry and reduc'd into troches which are of some use in physick, particularly to restrain spitting of blood and to stop dysenteries and other lasks. Dose from ten to thirty-six grains in an appropriate vehicle, also from powder of amber with spirit of wine is drawn a yellow tincture endow'd with a great many good qualities especially in apopleck and epileptick fits and paralytick cases, taken from ten drops to a dram in any agreeable liquor. Some dissolve pure fine camphire in this tincture to make what Monsieur Soleysel calls the Flaming Balsam, and recommends for wounds, bruises or cold humours in horse or man which may be seen describ'd in his book."

On the question of the origin of amber, about which so many speculations have been advanced, especially by early writers, it seems clear from the recent researches of Professor Conwentz, of Dantzig, that the fossil resin is not that of coniferous plants alone, but also of others, belonging to widely different families. Thus the character and property of amber may differ considerably according to the country producing it.

THE pith of the sunflower is claimed to be the lightest solid known, its sp. gr. being .028. Elder-pith has a sp. gr. of .09, cork .24.

GYMNEMA SYLVESTRE, an Assam plant, is stated to have the property of, when chewed, temporarily neutralising the sense of taste. Its use has been suggested as a means of disguising bitter medicines.

Reviews.

The Principles of Chemistry. By D. Mendeléef. Translated from the Russian (sixth edition) by George Kamensky, A.R.S.M., of the Imperial Mint, St. Petersburg. Edited by T. A. Lawson, B.Sc., Ph.D. In two volumes. (London: Longmans.) 36s.

CHEMISTS have agreed with remarkable unanimity on the claims of Mendeléef, not only as a chemical teacher, but also as a discoverer. The first English edition of his great work was published in 1891, and the second edition, which is the one now under review, appeared in the latter part of last year. It is evident, therefore, that there has been a fair demand for the work, which is a notable fact, for it is not a treatise which anyone would recommend to the student who was in the course of acquiring the elements of the science. No one but a chemist of some considerable experience could understand it, and he would need to be a man keenly interested in the theoretical side of the science to approach it. The interest of Mendeléef's treatise centres in his theory of the periodic law. This, we are told by the



editor of this edition, Mendeléef was led to discover in preparing the first edition of his work, somewhere between 1868 and 1871. The whole scientific world, it may be said, has adopted Mendeléef's views. They could hardly do otherwise. His facts are capable of rigid mathematical proof, and his theory was attested by the triumphant result of his predictions. It must be admitted that he more enthusiastically and more completely than any of his predecessors or contemporaries worked out that law and believed in it; but he is, perhaps, a little unjust in referring to the systems set forth by Newlands in England, and Chancourtois in France, in advance of his own studies, as exhibiting only "certain germs of the periodic law." One of the most interesting features of this edition is a study of Mendeléef's perplexity in presence of the discovery of argon and helium. He deals with these observations in a final appendix. He gives full credit to the importance of the discovery. That of argon, he says, "is one of the most remarkable chemical acquisitions of modern times," and he trusts that "Lord Rayleigh and Professor Ramsay, who made this wonderful discovery, will further elucidate the true nature of argon, as this should widen the fundamental principles of chemistry, to which the chemists of Great Britain have from early times made such valuable contributions." And yet it is not difficult to see that Mendeléef is bothered by argon. There is no place for it in his table of elements; he did not predict it nor provide for it in any way. He clings to the idea that it may be a polymer of nitrogen, N_3 , but the possibility of

truth in that hypothesis has become more hopeless with the further researches that have taken place.

Mendeléef is a great believer in law; but he is hardly a speculator. We have studied with the utmost care his chapter at the beginning of the second volume on "The Grouping of the Elements and the Periodic Law." It is painfully mathematical and laboriously established by intricate calculations; but this gives no sign that the author has ever given even a thought to the question of the origin of the elements or the possibilities of the birth of the atom; topics which are inevitably suggested by the theory. At any rate he rigorously excludes such frivolities from his treatise. His work, with its footnotes often crowding out the larger type text, is of a character which will test the endurance of any student; but the real enthusiast in chemistry will revel in it, and cannot fail to profit from it. The translation, which from the Russian must be an exceptionally difficult task, seems, as far as we can judge, to have been extremely well done. The English, at any rate, does not, except very rarely, manifest traces of a foreign origin.

Sell's Directory of Registered Telegraphic Addresses, National Directory of Large Commercial Houses, and Buyers' Guide for 1898; from Official Lists supplied by Authority of the Postmaster-General. Pp. 1,796. Subscribers 18s., non-subscribers 21s. (Henry Sell, 167 Fleet Street.)

THIS book, which is growing yearly indispensable, is one of the most up-to-date directories published. We notice, for instance, that the removals necessitated by the recent City fire are incorporated either in the body of the work or the appendix. Some important alterations in the tariffs for foreign telegrams, some of which were only finally agreed to on January 13, are included. The rate per word to Trinidad, for instance, has been reduced from 10s. 5d. to 5s. 3d., and to Jamaica from 5s. 10d. to 3s. The telegraphic addresses alone occupy 1,400 pages, and might almost be regarded as a list of the leading business firms of the United Kingdom, consisting as they do of names of leaders of commerce in all branches.

Personalities.

DR. F. F. SCHACHT, son of the late Mr. G. F. Schacht, was at a recent meeting of the British Gynaecological Society, appointed editor of the Society's *Journal*.

PATRONISED BY THE QUEEN.—Mr. Alfred Beken, chemist and druggist, West Hill Pharmacy, Cowes, has received the Royal Warrant of appointment as chemist to the Queen.

DR. DAWSON WILLIAMS, who has been associated with the editorial work of the *British Medical Journal* for the past seventeen years, has been appointed editor in succession to the late Mr. Ernest Hart, and Mr. C. Louis Taylor has been appointed assistant editor.

DR. FRANK CLOWES, chief chemist to the London County Council, has had the unusual distinction, for one of his comparatively young age, of being appointed Emeritus Professor of Chemistry at Nottingham University College, the chair of which he recently resigned.

MR. JOHN EASTLAND, chemist, 76 High Street, Margate, has been appointed superintendent of the Margate Ambulance Corps in place of the late Mr. C. E. Troughton, who was drowned by the capsizing of the surfboat *Friend to all Nations* during the December gale.

MR. T. WORTHINGTON, the Commissioner appointed by the Board of Trade to inquire as to the Trade and commerce of South America, left England on Thursday. He will afterwards report to the Board of Trade on the conditions of the leading industries, and will indicate directions in which British trade with South America may be advantageously extended.

MR. SIDNEY HARVEY, F.I.C., the South-Eastern Analytical Laboratory, Canterbury, Public Analyst for Canterbury, Dover, Folkestone, &c., writes to say, in reference to a paragraph in last week's issue, that he is not a chemist and druggist nor connected either directly or indirectly with the sale of food or drugs. Mr. Harvey passed the Major in 1864, but several years ago he gave up retail pharmacy.

Mauvais Quarts d'Heure.

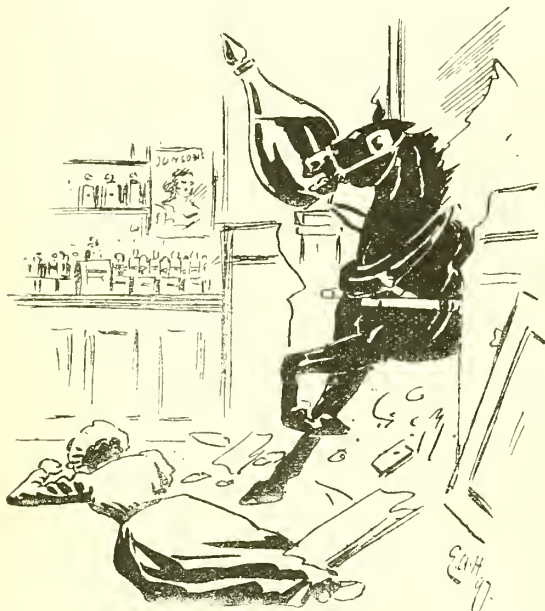
CHEMISTS TELL OF STRANGE INCIDENTS WHICH THEY HAVE EXPERIENCED.

THE TRAGEDY OF THE SCHEDULE.

One Saturday night about eighteen months ago I was left in sole charge of a busy pharmacy in the town of C—. Just when biz was at its best a farmer from a neighbouring village entered and asked for a packet of B.'s vermin-killer. Being unqualified I did not intend supplying him, but not wishing to offend him asked him to call on the Monday, when our manager would serve him, as I could not do so, not knowing him personally. "Oh," he said, "I'll soon find a witness"; and, catching sight of a certain police-sergeant, whom he knew, he ran into the street, calling out at the top of his voice, "Sergeant W—! Here, Sergeant! I want ye! Come here a moment!" and catching hold of him brought him across the road into the shop. In less than two minutes I had a crowd of quite one hundred people round the door, and rapidly increased till the street was blocked, all firmly believing that some dire catastrophe had happened. However, I did not supply him; but I shall not forget the scene in a hurry.—F. C. M.

CAME IN THE WRONG WAY.

One night in January last, about 6.30 P.M., after a busy afternoon, being market day, I was in a room adjoining my shop trying to catch a hasty cup of tea, after many futile attempts, when I heard a fearful crash which pen or tongue fails to describe. I rushed out to find a woman lying on my shop-floor, and a horse partly in my shop by way of my plate-

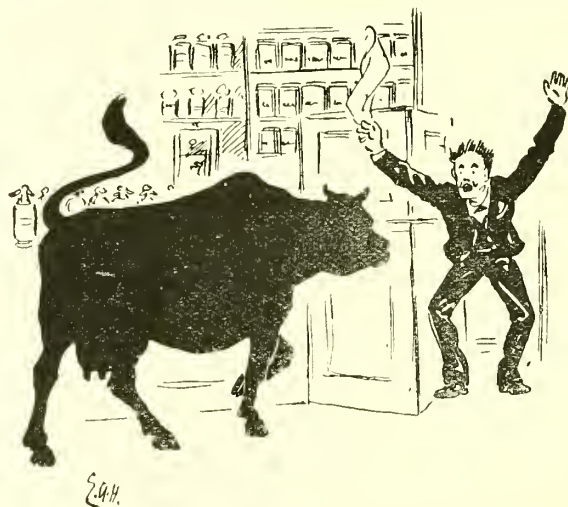


glass window. Blood was pouring out of a cut in the chest about 6 inches in length. Soon my shop-floor was covered with it, and what with cachous, feeding-bottles, and broken glass, presented a sight which lingered in my memory day and night for weeks. The horse lived a little while after, but all who saw it said it was not long for this world.—S. CARTER.

AN INFURIATED BEAST.

I was busy one evening serving a small customer when an unusual commotion outside my shop aroused my attention. I saw an infuriated beast being driven past my pharmacy. It, however, elected to choose its own route, and making a dart it rushed right into my shop. (The little customer vanished. I found her afterwards in my office.) I had visions of wreck and damage. However, I walked quietly

round the counter and found myself facing the huge beast. I then in a very gentle, persuading manner said, "Back! back!" I had set out upon a side counter a lot of syphons, and, of course, my heart sank as I saw the creature turn



herself round in my shop—and walk out without upsetting or damaging one single thing. My joy was shared by the beast's owner outside, who expected a large bill for damages.—RUSTICUS.

WENT FOR HIM.

My most awkward quarter of an hour was about five years ago. When I was going down the cellar-stairs from the shop a Newfoundland dog, which a customer had with him



in the shop, sprang at my head, thinking, I suppose, that I was a rat, with the result that he came headlong down the stairs, knocking me to the ground. Needless to say I am still alive.—G. T. PREEDY.

DAMPING YOUTHFUL ENTHUSIASM.

One of my early experiences in the drug-trade was when I found the warehouse-stairs on fire. I called for help, and then commenced to fill a bucket with water. When the

bucket was full the assistant took it from me, and, in his excitement, instead of throwing the water on the fire, he



threw it over his head and on to me, which made things all the more lively.—J. FIELDEN.

THE AWARDS.

We offered a guinea for the most thrilling experience, and we do not see how we can get past Mr. Fred. Reynolds' lion: that was a very bad quarter of an hour. There are others ten times more disastrous in their results, and we think that Mr. R. H. Parker especially deserves recognition for getting more in the space of a post-card than we were able to print in the same space. We award 10s. for his description of the hypophosphite explosion; and divide the other half of the sovereign between C. C. B. and F. C. M., the former for his rhyme in the Summer Number, and the latter for the "Tragedy of the Schedule." Will all competitors please claim their awards?

Colloquia

DE REBUS PRAECIPUIS CHEMIAE, PHARMACEUTICES, ATQUE BOTANICES, QUAE STIONIBUS ET RESPONDIS; AD USUM INGENUAE JUVENTUTIS.

SALUTE.

HOC opusculum de rebus praecipuis chemiae, pharmaceutices, atque botanices, in manus vestras, Viri Studiosi, longe ante tempus traderem, mihi consilium fuit; nisi multae res inopinatae, quas nunc referre non opus est, animam a proposito abduxissent, operisque progressum diutius retardassent. Ut res tam multas variasque in hoc parvulum redigerem, negotio mihi haud exiguo fuit; nam, dum brevitati quam maximae consuluerim, ne oratio obscura fieret, metuendum erat.

In rebus adeo multis interrogandis atque respondendis verba pene eadem haud facile evitare licuit. Brevitas quoque me, ut veritates nudas, factaque physica verbis ornarem, vetuit: sermonis igitur simplicis lucidique semper studiosus fui.

Quamquam maximam curam adhibuerim, verisimillimum tamen est errores haud paucos et in argumentum, et in ordinem operis ipsum admissos esse; quos experientia posthac docebit.

Accipite hunc animo, quo priores meos labores benevolo, quem, ut utilitati vestrae inserviat, vobis in manus jam tradidi; et, si mea sententia non exciderit, res mihi grata et jucunda erit. Valet.

T. F. U.

COLLOQUIUM PRIMUM.

Q. Quae est chemia?

R. Chemia scientia est, quae actiones rerum saepius minu-

tarum inter se indicat; earumque mutationes, sive conjunctiones, sive disjunctiones, ostendit.

Q. Quae his mutationibus favent?

R. Varia sunt; praecipue vero caloricum, affinitas, fluiditas, agitatio, frictio, et contactus.

Q. Quid de calórico intelligis?

R. Res subtilissima est, cujus particulae se fortiter repellunt, corpora omnia penetrant, atque cum iis avidissime se conjungunt.

Q. Quid significat caloricum latens, et liberum seu manifestum?

R. Caloricum, cum in rebus existit, quibus nullum temperiei incrementum manifestum dat, latens vocatur; cum autem sensibus nostris, vel thermometro, calorem communicat, liberum seu manifestum esse dicitur.

Q. Quibus legibus generalibus caloricum latens obtemperat?

R. Res fere omnes, quae ex statu rariore in densiorem transeunt, caloricum manifestum evolvunt; aut vice versa, absorbent.

Q. Quid significat affinitas rerum chemica?

R. Ea vis, adhuc quidem incognita, qua particulae corporum etiam minutissimae certos inter limites sese etrahunt, affinitas nominata est.

Q. Nonne sunt varietates affinitatis?

R. Plurimae; affinitas chemica inter particulas ejusdem corporis homogenea; et inter particulas diversorum corporum heterogenea appellata est.

Q. Quibus rebus affinitas praecipue afficiatur?

R. Massa seu quantitate particularum materiae, et earum se distantis potissimum afficitur.

Q. Quid significat fluiditas?

R. Res solida est quae cum calórico composita est, quo particulae ejus remotiores et mobiles factae sunt.

Q. An igitur caloricum rebus conjunctum differentiam inter res solidas et fluidas, et inter fluidas et vapores aut gasa, constituit?

R. Ita; vix enim totum caloricum ex aliquo corpore extrahere possumus; hinc solidae res quidem caloricum retinent; calórico tamen addito, rariores et fluidae fiunt; plure calórico addito, adhuc rariores, et in aeriformes convertuntur.

DE OXYGENIO.

Q. Quid est Oxygenium?

R. Gas est invisibile, sive aer, quod semper in eadem conditione remanet, nisi cum aliis rebus chemice conjunctum sit.

Q. Quibus ex rebus facillime Oxygenium paratur?

R. Ex Oxido Manganis nigro in tubo, aut retorta ferrea ad ruborem calefacta; vel ex eodem Oxido cum dimidio sui ponderis Acidi sulphurici commisto in vase vitreo lampade calefacto, Oxygenium prodit in excipulum.

Q. Quae ratio est, qua Oxygenium absolvatur?

R. Caloricum igne communicatum primo, et Acidum sulphuricum altero exemplo affinitatem inter Oxygenium et Manganis debiliorem reddit, partemque Oxygenii solvit, quod sub forma gasis surgit.

Q. Nonne Oxygenium obtineatur etiam ex aliis rebus?

R. Ita; ex plurimis rebus, praesertim ex Oxido Plumbi rubro, Oxido Hydrargyri rubro, aere atmosferico, Nitrato Potassae, caeterisque multis obtineri potest auxilio caloris.

Q. Quantum Oxygenii in centum mensuris aeris atmospherici continetur?

R. Viginti mensurae et una Oxygenii, et reliquae septuaginta novem Nitrogenii sunt.

Q. Nonne Oxygenium in aliis rebus, praeter quas enumeravimus, existit?

R. Cum plerisque rerum naturae in conjunctione chemica latet; et sub forma simplicissima, cui id subijci possit, cum calórico, luce, et electricitate, conjungi videtur.

Q. An Oxygenium respirare possunt animalia?

R. Brevi tempore solum; pulmones enim nimis stimulat, ibique inflammationem incitat: cum autem Nitrogenio dilutum, respirando aptum redditur.

The above is offered as an interesting exercise for pharmacy students. If it is appreciated we shall be glad to print another colloquy later. The best way to benefit by it would be for several students to read it in company, correcting each other as they proceed. There is no good reason why Latin should not be studied as if it were a living language

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See Diary, 1898, pages 21, 22, 23 and 24.



CANNON STREET.

THE picture on the front cover of this issue is from a water-colour sketch painted for us by Mr. Tilney. The artist believed there would be some snow in Cannon Street on the day when his view should be published, and he provided for it accordingly. His fancy may turn out true yet, but at the time of writing neither the barometer nor the Meteorological Department holds out hopes or threats. In another respect the artist has taken a liberty with facts. Sir Christopher Wren did not place St. Paul's Cathedral in just such a posi-

tion as would make it an effective finish for this picture. In fact, from the point of view of this sketch St. Paul's would not be seen at all. This would have been a pity, both on our own account and on that of St. Paul's. Consequently the cathedral had to be moved a little to the southward for the occasion.

"Cannon Street," in the pharmaceutical vocabulary, like "Tatcho," stands for true, good, perfect, up-to-date. Al-just as Bloomsbury Square, in the same dictionary, signifies by-laws, committees, and guineas. "That's a Cannon Street idea" has come to mean, in the language of chemists and druggists, something sound, something to be trusted. We hope we have done something in our time to justify that signification, and nothing to discredit it.

Cannon Street, as we know it, is a modern thoroughfare. It was prescribed by Act of Parliament in Victoria 10 and 11 (1853-54). It cost 200,000*l.*, and when it was ready for us we appeared. That was in 1859. There was an old Cannon Street which branched off from Watling Street and led to London Bridge. The etymologists say Cannon Street is a corruption of Candlewick Street, or Candelwykestrete, as it was spelt in the first recorded mention of it in a coroner's roll of King Edward I., 1276. Wheatley and Cunningham (in "Modern London") say this was the earliest highway through the City—a statement which Cheapsiders treat with the contempt which we should think it deserves.

Watling Street, which meant in Saxon the noble street, has retired into comparative obscurity by the side of Cannon Street. This should be a warning to rivals generally. Watling Street turns up in all parts of the country in a more or less dilapidated condition. It started from the "London Stone," from which it is believed the Romans measured all distances in Britain. "London Stone" is still preserved encased in the Cannon Street frontage of St. Swithin's church.

From the locality shown in our picture we greet subscribers in all parts of the earth. Those of them who have gone out from London will probably recall the corner, and it may remind some now widely parted from us of old times. Colonial druggists who visit this country are requested to fix this sketch on their memories and to find their way to the spot when they visit the old country. We have in contemplation some special provision for their convenience here which we shall announce shortly. It may be as well to state that the gold letters which partly cover our building are another of the artist's fancies. The letters are not there yet, but the design of them is shown in case our Klondyke or Johannesburg subscribers should be wishing to present us with a testimonial.

Advertisers will note that the Mansion House Station of the Metropolitan District Railway is next door to us, so that they can bring their orders to us with the least possible trouble to themselves. We may add that our telegraphic address is "Chemicus London," and that our telephone-number is "852 Bank." To subscribers generally we should like to add that we have just renewed the lease of these premises for a lengthy term, so that they can with confidence send us ten years' subscription in advance if they feel so disposed.

"IT'S HOWARDS'."

WE know of no article or section in this issue of THE CHEMIST AND DRUGGIST so interesting to pharmacists generally as the "Supplement" contributed by Messrs. Howards & Sons, the famous manufacturing chemists of Stratford. Messrs. Howards & Sons have just completed the first century of their history, and in commencing the record

they take the opportunity of doing honour to their founders and predecessors, and give a few details of the steps by which they have attained the high position they occupy in the chemical world.

We hope no one will miss reading that supplement. There is no attempt at preaching in it, but it conveys a lesson well worth noting in these days. There are advertising authorities in London who will undertake to boom a new business into notoriety in three months; and they do it. The proprietors accumulate wealth beyond the dreams of avarice, the business is sold to a company, and a knighthood or a seat in Parliament crowns the great man's career. There is nothing to be said against all this. But it is something like the forced strawberry compared with the natural-grown one.

The memory of no pharmacist living does not go back to the time when the remark "It's Howards'" was not a guarantee of quality. Even those strict pharmacists who make a practice of testing everything received into their business sometimes pass a package with the remark which heads this note. This is a precious reputation to have gained, and four generations have maintained it. When Luke Howard and William Allen associated themselves in the manufacture of chemicals and the conduct of a pharmacy, a hundred years ago, there was no Sale of Food and Drugs Act, and, if tradition speaks truly, substitution, adulteration, and tricks of trade, as these were amiably called, were rather the rule than the exception. These two young Quakers set the example of the highest honour. They were, besides, furnished with superior skill, and we presume with fair means. If, as we have supposed, the general level of education, of skill, and of probity was lower than the average of to-day, so much the better was it for their chances of success. They attained success in good measure, and their successors have inherited it; but they have done this by maintaining the principle of doing the best work, regardless of what competitors might be doing.

The full story of a firm like Howards' is worth writing. We could wish the author of the sketch we publish to-day would undertake it. The connection of the house with the introduction of quinine and with the scientific cultivation of cinchona is briefly told, and perhaps it is in that connection that the Howards' name is most widely known. But there is not a substance manufactured by them respecting which they could not tell us many things, commonplace enough to them, but of value to those working on the same lines. Perhaps business has hardly reached the stage at which such altruism can be indulged in without loss. However this may be, we think we may venture, on behalf of pharmacists generally, to wish the Messrs. Howards many happy returns of their centenary.

ANOTHER REGENERATION.

MEMBERS of the Chemical Society who reside outside the metropolitan area have a grievance—they cannot vote for the election of office-bearers except they are present at the meeting whereat such election takes place. They have therefore petitioned the Council of the Society to have a change. The question really arose when Professor Ramsay was put forward as a candidate for the presidency in opposition to Professor Dewar, when many stated that this was the only way in which they could get attention called to the necessity for altering the mode of election. The daring project failed, and after all it has been discovered that there is another way—by petition, which some 600 members signed, and many more agree with, although they did not sign. The Council are to consider the matter, and have taken the first step by appointing a committee to revise the

by-laws, but a new charter will be required if the mode of electing office-bearers is to be changed, and a new charter costs money—250% to 500%, it is said. The Chemical Society, having no examination-fees coming in, must think twice or three times before it spends its money in such an extraordinary fashion. Still, it is worth considering. When the charter was obtained the Society was essentially a metropolitan one. It is no longer so. Of the 2,100 members only about a third reside within easy distance of London; between 300 and 400 are resident abroad, and the rest are in the provinces. What the petitioners demand is that all should have the privilege of voting by post, and this does not seem unreasonable, but it will be a misfortune to the Chemical Society if the voting for the places of honour, such as the presidency, is made so democratic. In that case such bitterness of spirit as was shown at the last annual meeting would be accentuated. A better plan would be to provide, through fresh powers, for the nomination of members of Council by members of the Society, election of nominees by postal or personal vote of the members, and election of office-bearers by the Council from amongst themselves. This is the Pharmaceutical Society's plan, and it works well. It gives the members practical control of the places of honour because they can keep anyone out of the Council who, they may think, is unworthy of that or a higher honour.

THE EMMENS HYPOTHESIS.

WE do not agree with Mr. Stephen H. Emmens, the Anglo-American physicist and chemist who says that he converts Mexican silver dollars into stuff which the United States Assay Office and an English Syndicate buy as gold—



STEPHEN H. EMMENS.

argentaurum, he prefers to call it. Mr. Emmens says we have said that he said things about the argentaurum which he did not say, and we are appropriately humble. By the courtesy of his brother, Mr. George Emmens, we are able to give to-day a portrait of the argentaurum philosopher and a picture of the argentaurum laboratory in New Brighton, Staten Island, N.Y. Mr. Stephen H. Emmens (he does not,

by the way, call himself "Dr.") sent us a copy of a little pamphlet entitled "*Arcana Naturæ*," in which there is mention of the "*Argentaurum Papers*," which we on this side of the Atlantic have been led to think contains all about the theories upon which silver is changed into gold. We have now read this book. It consists of "some remarks on gravitation"—i.e., 129 pages of the remarks and twenty pages about Mr. Stephen H. Emmens. It is no concern of ours to interfere in a wrestle between Mr. Emmens and the shade of Sir Isaac Newton, which is what Mr. Emmens is endeavouring to do. But we do want to know about the argentaurum philosophy. There is little in the papers on the chemical side of the matter, but what there is we reproduce here, as it is only fair that we should print what Mr. Emmens really does say. He is a believer in the Proutian hypothesis, which, indeed, seems to be the basis upon which he starts to convert one elementary substance into another. This is put with certain clearness in the following pronouncement.

The vast array of the facts which are memorised in the very imperfect, very unsound, and yet much-accepted "*Periodic Law*" of De Chancourtois, Newlands, Lothar Meyer, Mendeléeff, and other philosophers, teaches us that the specific display of certain modes of energy, which causes us to label as an "element" the matter thus manifested [by attraction], is possible only under certain conditions of mass-value—that is, under certain relations of matter to gravitation-energy. We are forbidden, by Newton's third law of motion, to believe that any force other than *vis inertiae* can be inherent in matter, or that any force combined with matter can be other than dual in character. The cohesive force, for example, which is manifested by a particle of gold for another particle of the same substance does not exist in the particles *per se*. It requires the presence of at least two particles.

We are then led up to the enunciation that "space is energy," and are told that—

the conviction is fast growing in the minds of the more thoughtful [chemists and physicists] that the so-called elementary bodies are more or less protean. The fact is being appreciated that the unknown and variable quantity of *vacuous space* which exists in all bodies has hitherto rendered nugatory all our attempts to ascertain the real density of any substance. In organic chemistry the question of structure—that is, the combination of matter and space—is becoming of prime importance.

This is practically all the direct reference to the new argentaurum chemical philosophy which we find in the book, so we turn to the sixteen-page pamphlet "*Arcana Naturæ*" for more of the "truth." In this is a translation of an article on "*Argentaurum and the Philosopher's Stone*," by M. Pierre de Mériel, originally printed in *La Nature*, in the course of which the writer says:—

Dr. Emmens is a supporter of this periodical law, and contends that his argentaurum occupies the hitherto blank space occurring between silver [cæsium.—Ed. C. & D.] and gold in the table of elements grouped according to the doctrine of periodicity.

In spite of the above-quoted contemptuous reference to the periodic law, Mr. Emmens allows these remarks of M. Mériel's to pass without question. In thanking *La Nature* for publishing the article, Mr. Emmens states his hypothesis more fully than he does in the "*Argentaurum Papers*." Thus:—

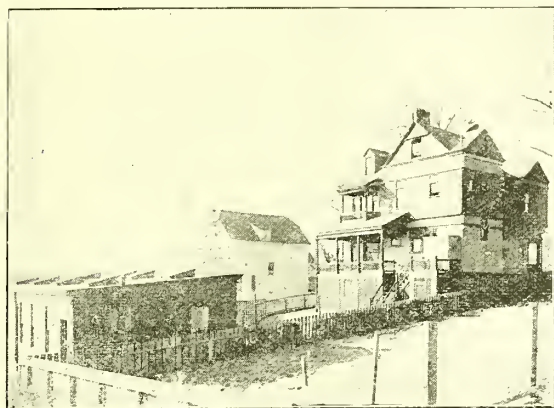
If we have regard to the very considerable differences of specific gravity and other physical properties known by all chemists to exist between various forms of silver and gold, we may well ask ourselves whether these differences arise from a presence, in greater or less quantity, of some substance other than silver or gold. To say that chemical analysis proves the absence of any such other substance is illogical; for, if there be only one matter, and if the difference between silver, gold, and a possible other substance be a mere affair of molecular aggregation, it may well happen that the very process of chemical analysis effects a change into silver or gold grouping, and thus renders our search abortive.

So far as my own observations have yet gone, I am led to believe that ordinary silver consists of groups of particles having varying degrees of molecular stability. Some of these groups are capable of disintegration and rearrangement in the form of argentaurum; and this latter appears to be altogether unstable. At the least provocation, so to speak, it reverts into silver or advances into gold. This seems to explain why the chemical analysis of gold found in nature invariably shows the presence of both silver and gold.

The so-called "allotropic silver" of Wohler, Muthmann, Carey Lea, and other chemists is certainly not silver. That it is some other body is clearly proved by its attributes. But it is remarkable unstable. It reverts into silver with such facility that chemical analysis is helpless to reveal the cause of its difference from that body.

We may say in passing that this allotropic or colloidal silver has recently been re-investigated by several continental chemists, who have had no difficulty by a wet process in producing the metal as a yellow powder which in solution has reactions resembling neither those of silver nor gold, but it can be worked back into silver. The next step in the argentaurum story is supplied in a letter written to Sir William Crookes in May last, wherein Mr. Emmens says: "I think there is but one matter in the universe. The chemical 'elements' are but modes of this universal

substance combined with more or less of a something we call 'energy.' By changing the mode we change the 'element,' but not the substance." He then goes on to



THE ARGENTAURUM LABORATORY.

say that he had altered his method of making argentaurum, and now the operation consists of five stages, as follows:—

- (a) Mechanical treatment.
- (b) Fluxing and granulation.
- (c) Mechanical treatment.
- (d) Treatment with oxides of nitrogen—i.e., a modified nitric acid.
- (e) Refining.

We regard the mechanical treatment as the *causa causans*. The fluxing and granulation serve, we think, merely to render the molecular aggregates susceptible of displacement and re-arrangement.

If you or Professor Dewar will try the combined effect of impact and very low temperature, you can easily produce some gold. Take a Mexican dollar and dispose it in an apparatus which will prevent expansion or flow. Then subject it to heavy, rapid, and continuous beating under conditions of cold such as to prevent even a temporary rise of temperature when the blows are struck. Test the material from hour to hour, and at length you will find more than a trace of gold.

In the same letter Mr. Emmens informed Sir William Crookes that he had ordered a force-engine capable of producing pressures exceeding 500 tons per square inch, and when this was delivered his son "obtained some results that overthrow certain views set forth in 'Thomson and Tait.'"

From the foregoing we gather that the principle of the manufacture of argentaurum is, literally, a pushing closer together of the particles of matter constituting silver. Why should that produce gold and not caesium, the element between them in Series 1 of the periodic table? Between silver and gold there are, in fact, sixteen known elements with atomic weights higher than silver and lower than gold. Why should the transmutation jump over all these, or why should it stop at gold? We have mercury, thallium, lead, bismuth, thorium, and uranium with greater atomic weights than gold. Is it possible to carry the condensation on to these? Of course, it ought to be, if Mr. Emmens's hypothesis is right. We put these questions because Mr. Emmens has supplied us with a table showing the quality of twenty-seven ingots of argentaurum which he has already made and sold, and these were of varying quality. For example, the fineness of the first (704 oz.) was $\frac{658}{1000}$ of gold and $\frac{342}{1000}$ of silver, of another (1977 oz.) $\frac{2295}{1000}$ gold and $\frac{771}{1000}$ silver, and of the last (2886 oz.) $\frac{7053}{1000}$ gold and $\frac{293}{1000}$ silver. The ingots have never been twice of the same quality; and silver and gold do not make up the entire weight. If the difference is made up by intermediate elements, the fact would give colour to the truth of Mr. Emmens's hypothesis.

ULSTER CHEMISTS (LIMITED).

COMPANY pharmacy seems to be progressing in Ireland. We announced a fortnight ago that a new and extensive chemists' company was in course of formation in Belfast, and we then named the businesses which were to be taken over. The prospectus has now appeared, and further particulars are given. These are summarised in our Irish news this week. Colonel McCalmont, J.P., M.P., appears on the directorate, and will, we presume, occupy the chair. A chemist who is the managing director of a chemist company at Huddersfield, contributes his experienced assistance, and a Londonderry doctor is also associated with the board. The other three directors—Samuel Gibson (chemist and druggist), R. W. McKnight (pharmaceutical chemist and member of the Council of the Pharmaceutical Society of Ireland), and John McCrea (chemist and druggist, Newry)—are, we should think, the best sort of men for the purpose. The other vendors, or most of them, will remain, we understand, as managers of their respective businesses, salaried by the company. It appears from the figures given that the company is buying the seventeen businesses at an average of 2,960*l.* each, and that the average annual profit of each, "subject to the original vendors' remuneration for personal management," is 399*l.* If this means, as we suppose it does, that the profits of each business are reckoned before anything is allowed for the original proprietor's drawings, the prospects of the shareholders are not so rosy as the prospectus makes them appear. To pay the 6-per-cent. preference shareholders, and 10 per cent. on the ordinary shares, will require 5,200*l.*, which would leave 1,589*l.* out of the profit if it is equal to the average. But each business will require a manager, and each manager will want, we suppose, something like 200*l.* a year. There goes 3,400*l.* Besides, Colonel McCalmont and his associates will expect something handsome, there will have to be a general manager, and there are many other expenses connected with a company, as well as the savings which the directors anticipate. The experiment is a curious one, and we should not think it a promising one.

CINCHONA.

THE quantity of 'quinine in the cinchona-bark offered at the ten Amsterdam auctions of 1897 fell considerably below that offered in 1896, and would, indeed, have carried us back to the figures for 1895 but for the huge supplies offered at the December sales. Weight for weight, the supplies of bark actually fell below those of 1895 as well as of 1896, but it is too often forgotten, in speculating upon the future of the bark-supply, that while the output of the island of Java is falling, the alkaloidal richness of the bark continues to rise. Thus, the average richness (in quinine) of the Java manufacturing-bark in 1897 shows an increase of nearly 5 per cent. on that of the year before, and of over 43 per cent. since 1889. The actual average unit for each year, and its percentage increase upon its predecessor during the past seven years are shown in the subjoined table:—

	1891	1892	1893	1894	1895	1896	1897
Average unit per cent. ...	4.08	4.50	4.60	4.93	5.01	5.48	5.73
Per cent. increase on the year before...	...	2	10	2	7	2	9
							5

From the bottom line it will be noticed that the average unit has generally taken a big step forward every second year. If this tendency be maintained in the same ratio during the twelvemonth just commenced the average quinine-content of the manufacturing-bark offered at Amsterdam

this year will be well over 6 per cent. Hitherto such a unit has only been attained in the auctions of August and September, 1897, and a few years ago it would have been looked upon as wildly improbable.

The "Syndicate"—if we may call it by that name—of Java planters and Amsterdam brokers that has undertaken the task of raising the unit-price by concerted action during a preliminary period of three months commenced its operations at the auctions of Thursday last. It only succeeded in preventing the bark from falling below an average unit of 690c. per half-kilo., which is certainly a Pyrrhic victory. It may be urged that, without the stand made by the "Syndicate," the unit would have been down to 4 or 4½c. per half-kilo., and every advantage lost that was gained during the autumn. Still, if the planters cannot do better in February and March than they did last Thursday their co-operation will probably not outlive the initial three months, and the last state of the planting interest will be worse than the first, for the decisive defeat of a "Syndicate" that started under such favourable auspices as the present will probably deter others from trying the policy of concerted action afresh. We have often expressed the belief, to which we still adhere, that the Java planters could have obtained effective control of the bark-market if they had known how to seize the right moment, and had had the right man to lead them. But we are afraid that time is now gone for good, and so far we have seen no evidence of the existence of a man qualified to fight the quinine-combination successfully. This does not imply that we take a gloomy view of the quinine-market—far from it—but we do incline to the belief that the planters will shortly fall more helpless victims to the quinine "combination" than they have ever been before. The quinine-makers are a small but highly-organised body, the planters a mere undisciplined mob. It seems, indeed, from the sale-catalogue of the last Amsterdam auction, that the firms who took a leading part in the December conferences that led to the scheme for concerted action did withdraw the bulk of their cinchona at prices above the unit obtainable at the auctions, but there appear to be plenty of others only too ready to take the places of those who refuse to sell. And yet there are many factors which would make a combination of cinchona-planters more easy to manage than many another syndicate that has for years held its own in the face of adverse circumstances. For one thing, 85 per cent. of the available quinine-supply of the world is produced in one island, and by less than one hundred firms. Next, it is highly probable that the bulk of the great factories have not more than a moderate stock of bark on hand, and that there is no excessive cinchona-stock in second hands to harass the action of a combination. Further, a bark-combination would be free from the great trouble of other syndicates in raw products that new supplies may be discovered at any moment. It takes time for new cinchona-plantations to come into bearing, and no danger could threaten from South America, unless the price were raised exorbitantly.

With regard to the quinine-factory which the combined German makers are said to contemplate establishing in Java, at Pengalengan, the promoters of the undertaking in Java have published a statement to the effect that the projected factory is entirely "national" (*i.e.*, Dutch), and that neither German nor English manufacturers are concerned in it. We believe that this is only technically correct, and that, in fact, the promoters of the Pengalengan works are connected with the Amsterdam Quinine-works, which, in turn, are closely allied with the firm of Böhringer & Sons, of Mannheim.

ELECTRO-CHEMICAL INDUSTRIES.

Mr. J. W. Swan, F.R.S., who, with Dr. John Attfield, is one of the small band of chemists and druggists who have received the highest distinction in science (Dr. Tilden is a Major man), is this year the President of the Institute of Electrical Engineers, and in that capacity recently delivered an address, in the course of which he gave a sanguine forecast of the application of electricity to chemical processes. He seems to think the future of even the Solvay alkali process is precarious, for—

The electrolytic treatment of brine for the production of soda and chlorine now threatens to displace all the older chemical processes, especially since the introduction of the successful rocking apparatus of Castner and Kellner, in which an end-to-end flow of mercury through three compartments prevents the mixing of the electrolyte, and effects the separation of the sodium and chlorine. A similar industry is the manufacture of chlorate of potash by electrolysis, in a tank divided by a porous partition, with very thin iridio-platinum anodes and iron cathodes. The electrolyte is usually a solution of chloride of potassium, maintained at a temperature of 45° to 50° C. The action of this cell results in the formation at the anode of hypochlorite, which is immediately decomposed, with the formation of chloride and chlorate of potassium. In Switzerland and in Sweden this process is worked with great commercial success by the aid of power derived from water.

He also mentioned that vanillin and heliotropin are now produced by an electrical method in which intermittent or alternating currents of high tension are employed, and advised young electricians to turn their eyes towards the rich possibilities that await them in the application of electricity to chemical processes.

ABORTIVE MEDICINES.

The *Lancet* notes the conviction of a woman herbalist at Wigan for selling abortive medicines. The prosecution was instituted under section 59 of 24 and 25 Vict. c. 100, which enacts:—

Whosoever shall unlawfully supply or procure any poison or other noxious thing, or any instrument or thing whatsoever, knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman whether she be or be not with child shall be guilty of a misdemeanour.

The medicines supplied by the woman were a mixture, pills and powder. These were analysed by Mr. W. J. Orsman, F.C.S., public analyst. Each dose of the mixture contained 8½ gr. of colocynth, 11½ gr. of aloes, 9½ gr. of borax and ½ minim of savin oil. This was taken thrice daily, along with a pill which contained ergotin, aloes, sulphate of iron, extract of hellebore, and oil of savin. After finishing the medicines the victim had to take 58 gr. of powdered colocynth in two doses! If this is the sort of treatment that is adopted by "female mixture" people, the sooner everyone of them goes the way of the Wigan woman the better will it be for mankind.

A NEW SYNTHESIS OF GLYCERINE.

The simplest member of the group of the ketoses, of which ordinary lævulose or fruit sugar is the best known representative, is dihydroxyacetone, $\text{CH}_2(\text{OH}).\text{CO}.\text{CH}_2(\text{OH})$, which has long eluded the attempts of chemists to isolate it in the pure state, although mixtures in which it is undoubtedly present have been obtained by several investigators by the oxidation of glycerine. *Nature* mentions that Oscar Piloty has now succeeded in preparing this interesting compound in the pure condition. The starting-point for its preparation is the oxime, $\text{CH}_2(\text{OH}).\text{C}:\text{NOH}.\text{CH}_2(\text{OH})$, which can easily be obtained from the product of the action of formaldehyde on nitromethane, both substances of very simple constitution. When this oxime is treated with bromine, nitrous oxide is evolved and dihydroxyacetone produced. It crystallises well, and has a sweet and cooling taste. In other respects it also shows the well-known characteristics of the sugars, reducing

Fehling's solution almost as powerfully as grape sugar, and yielding an osazone with phenylhydrazine. On reduction it is converted into glycerine, a new synthesis of this important compound being thus effected. The production of dihydroxy-acetone from formaldehyde is of great interest in view of the important function which the latter is supposed by many to perform in the natural production of sugars in the vegetable organism.

BIG DOSES OF ARSENIC.

Arsenic is one of the most valuable remedies in materia medica, but at the same time one of the most dangerous, there being many people who cannot tolerate even a minim-dose owing to the headache which it produces. It is astonishing, therefore, to find that the custom still obtains of pushing the administration of liquor arsenicalis to the limit of 15 to 20 minim doses, and we are pleased to note that at a recent meeting of the Clinical Society of London Dr. Colman brought up the subject. He referred especially to the case of a girl of 12 suffering from chorea, who received 15 minims of the liquor thrice daily. It cured the chorea and the case was dismissed from the hospital, but soon returned with almost complete paralysis of all muscles of the extensors below the knees, and other alarming symptoms due to the arsenic. The case showed, he said, that heroic doses of arsenic are not unattended by serious risk. Several instances of similar paralyzes had come under his notice, and in one recovery did not take place. Dr. Beevor mentioned the case of an adult who took 15 minims thrice daily for six weeks, and then presented double wrist drop with severe pain in the legs, but after two years recovered. These are facts which dispensers should keep in mind.

A WONDERFUL FREAK OF NATURE.

An advertisement in Tuesday's *Daily Telegraph* announces that—

MESSRS. JOHN BOTT and SON will SELL by AUCTION, as above, on WEDNESDAY AFTERNOON NEXT, Jan. 26, at three o'clock sharp, the entire CONTENTS of a DENTAL SURGEON, consisting of operating-chair by Ash and Son, waiting-room suite, signboards, 36 dental appliances, overmantels, girandole, engravings, oil paintings, drilling and stopping machines, lathes, cabinets, show-cases, &c.—On view day before sale.

A dental surgeon with an operating-chair, a waiting-room suite, signboards and all the rest inside him should be such a catch for Barnum & Bailey as they have not had for many a day.

A BILL FOR THE SUPPRESSION OF QUACKS.

The editor of *Science Stiftings* is a very good man, who has a holy horror of anything which partakes of the character of quackery, and he claims to have carried on a "Crusade" (with a capital C) against quackery for years. One feature of this crusade has been the award of certificates of merit to products such as Bass's beer, Gilbey's wines, and Dunville's whisky, which have met with his august and gustatory approval. *Ally Sloper*, we believe, adopts a similar system of encouraging worthy manufacturers. The *Science Stiftings* gentleman has now done what everybody who demands legislative assistance ought to be required to do; he has drafted a "Bill for the Suppression of Quacks," which he fondly hopes the General Medical Council will adopt. The advantage of specifying what is wanted in a formal document is that the impracticability of the demand is generally made clear. The S.S. Bill proposes "that every proprietary article of a medicinal character (liquid, solid, or otherwise)"—we like the otherwise—must "bear a clear plain imprint of the composition," in addition to the Government-stamp. Before it can be sold, a packet of the liquid, solid, or otherwise is to be deposited with the Local Government Board or Home Office, "together with a proof of all printed matter to appear thereon or in connection therewith," and the Local Government Board or Home Office is either to authorise it or to

order a cautionary notice to be attached to every packet. Fifty-pound licences are to be granted to vendors of the approved articles, and writers of false testimonials are to be punished by fine or imprisonment. The writer does not appear to be intending to write a burlesque, but he must fancy he is living in Laputa, or in one of the regions imagined by Mr. W. S. Gilbert.

THE LONDON COUNTY COUNCIL AND THE TEACHING OF BOTANY.

The Parks Committee of the London County Council, in conjunction with the Technical Education Board, in which the Council have the predominating influence, are about to start an experiment with the view of encouraging the teaching of practical elementary botany. They propose to devote a space of about 20 rods in three of the parks under their control—viz., Battersea, Ravenscourt, and Finsbury—to beds in which the more hardy typical plants of twenty natural orders shall be grown for the purposes of aiding teachers in demonstrating to their classes. The natural orders to be represented are the following:—

Ranunculaceæ	Compositæ	Cucurbitaceæ
Cruciferae	Caryophyllaceæ	Leguminosæ
Rosaceæ	Umbelliferae	Scrophulariaceæ
Boraginæ	Labiatae	Primulaceæ
Campanulaceæ	Convolvulaceæ	Geraniaceæ
Malvaceæ	Papaveraceæ	Liliaceæ
Amaryllidaceæ	Graminæ	

The plants are to be labelled both with their common and systematic names, and the large trees and shrubs are also to be named for the same purposes. A guide-book dealing with the chief characteristics of the plants will be published under the supervision of the Technical Education Board. Orders can be obtained allowing teachers to take away specimens for illustrating their lectures, so far as is possible without destroying the utility of the beds.

WHAT AMERICANS ARE DOING.

The United States Export Association which was incorporated a year or two ago does not intend to degenerate into an everyday chamber-of-commerce affair. It is about to establish an agency at Warsaw to further the sale of American manufactures in the Russian Empire. This agency is to be the first of thirty or more to be opened at various commercial centres abroad, including one in every South American country, France, Germany, Holland, Belgium, Switzerland, India, Straits Settlements, and South Africa. The idea is to make the agencies self-supporting by the sale of American goods on commission to the foreigner. The Association, whose head offices are in New York, has grown from an initial membership of twenty-five to "several hundred firms and individuals, comprising large and influential houses in ninety-seven lines of trade." The main object of the Association is to obtain and circulate among its members authentic information regarding foreign markets. Facilities are also afforded for bringing together parties who wish to transact business, the head offices being furnished with interpreters for this purpose. Other advantages to members are translations of all foreign correspondence, and the issue of regular bulletins printed in German, French, Spanish, &c., containing information for foreign buyers. A credit system has also been established, whereby the business and financial standing of foreign buyers is ascertained and circulated. Another object is to establish an American merchant marine, banks, &c. The above are only a few ideas of the organisation. In fact, it would appear as if the Association had been commissioned to do all the trade in the two hemispheres. Where do we come in?

THROUGH an accident to a child an American doctor has discovered that pyrethrum, or insect-powder, probably has anthelmintic properties. He calls on other physicians to investigate.

Oil of Spike Lavender.

A NEW ADULTERANT.

By JOHN C. UMNEY, F.C.S.

THE essential oil of spike lavender (*Lavandula Spica*) although but little used by pharmacists, is used in considerable quantities by soap-manufacturers and others. The yield of the oil in Grasse, Nîmes, and in Southern France generally, in the autumn of last year was much below the average, and, in consequence, much higher prices have ruled, and at least 50 per cent. more is now being paid as compared with rates ruling after a normal season.

A critical examination of some of the so-called spike-lavender oils now being offered clearly indicates that the physical and chemical characters differ widely from those of pure spike-lavender oil, such difference being quite apart from a coarseness of odour.

In specific gravity much of the oil now current shows no great differences, being from .905 to .915, at 15° C., which is approximately the range of specific gravity of pure spike-lavender oils, and the optical rotation in a tube of 100 mm., from +0 to +7, is practically normal.

There is a marked difference, however, in their behaviour towards alcohol of 70-per-cent. (volume), for whilst pure spike oil dissolves readily at 15° C. in 2½ to 3 volumes of such alcohol, these sophisticated oils do not dissolve completely in less than 5 volumes.

The percentage of alcohols in these oils, as determined by the acetylation process, varies between 20 and 25 per cent., whilst in pure spike oils it varies between 30 and 40 per cent.

These variations from normal spike-lavender oils point strongly to the presence of a rosemary oil of a low grade, possibly the Dalmatian variety. Dalmatian rosemary oil has practically the same specific gravity and optical rotation as spike-lavender oil, but it is not soluble even in 10 parts of 70-per-cent. alcohol, and the percentage of alcohols has not exceeded, so far as I have observed, 16 per cent.

The odour of this oil when acetylated is very different from that of acetylated spike-lavender oil, owing to the formation of linalyl and geranyl acetate in the latter the alcohols yielding these esters being absent from rosemary oil.

I have prepared mixtures of equal volumes of pure spike-lavender oil and Dalmatian rosemary oil, and the product is indistinguishable by odour, or any of the foregoing tests, from the samples of the sophisticated oil under notice.

It seems necessary to insist that oil of spike lavender shall have the following characteristics:—

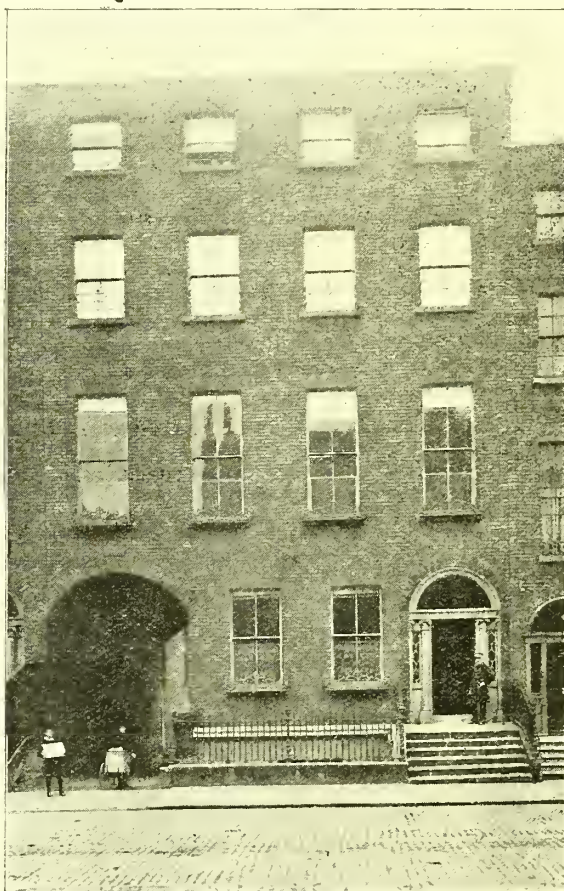
Specific gravity at 15° C., .905 to .915	} To ensure freedom from turpentine.
Optical rotation in a tube of 100 mm., from +0 to +7	
Soluble in 3 volumes of alcohol 70 per cent. by volume	} To ensure freedom from rosemary oils.
Not less than 30 per cent. of alcohols	

THREE lichens growing on cascara bark have been identified. They are (1) *Tholotrema rhamnii purshiana*, (2) *Ochrolechia rhamnii purshiana*, (3) *Arthonia complanata*.

DENTISTRY IN NEW ZEALAND.—An amendment of the Dental Acts has been asked for by the Board of Dental Examiners. They desire that no dental student shall present himself for examination until he has attained the age of 21 years, and can produce a certificate of having passed the preliminary medical examination of the University of New Zealand, and of instruction at the University of Otago in anatomy, general and practical (dissections), physiology, pathology, and chemistry, including practical pharmacy and therapeutics.

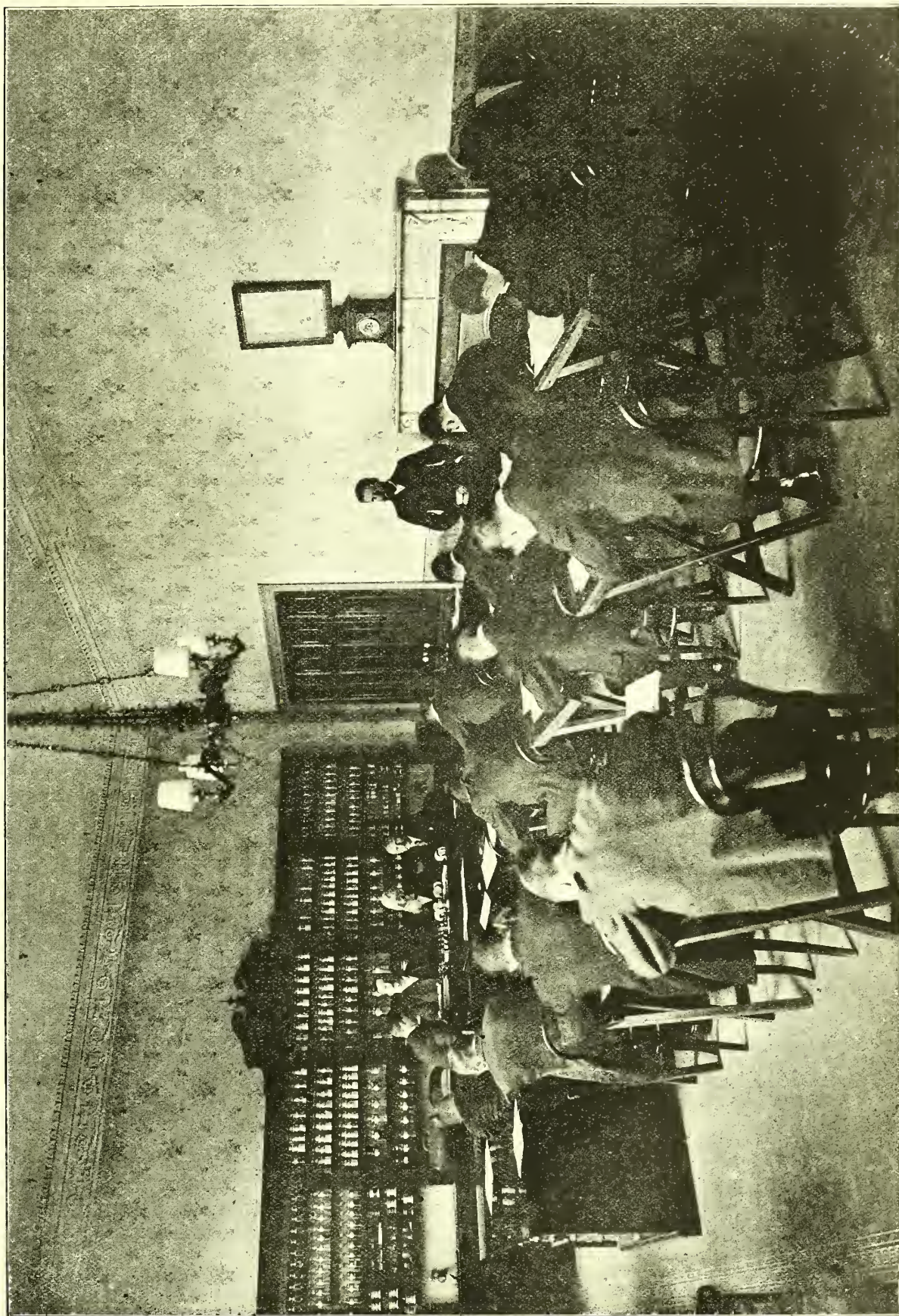
The Premises of the Pharmaceutical Society of Ireland.

THE habitations of the Pharmaceutical Society of Ireland have been various. At first accommodated by the King and Queen's College of Physicians, Ireland, in their palatial buildings in Kildare Street, the Society had the advantages of their Registrar and offices, and of their handsome examination-hall for its examinations and annual meetings. This was under the presidency of Sir Dominic Corigan, Bart. (1875-78), and of Professor Tichborne (1878-83), and vice-presidency of Dr. Aquilla Smith (1875-83).



67 LOWER MOUNT STREET, DUBLIN.

The original Council of the Society was composed of two-thirds medical gentlemen and one-third "chemists and druggists" who were registered under the Act as pharmaceutical chemists, of whom Mr. Wm. Hayes and Professor Tichborne remain as members of the Council; Mr. J. E. Brunker, M.A., who was elected President in 1883, has not been on the Council for some years, and Mr. Ed. Hodgson, J.P., retired from the Council only last year. This combination served to start the Society, and had its advantages as well as disadvantages. It gave a prestige which otherwise the Society would never have had. The Society's proceedings were formed after the model of those of the Royal Colleges. The examinations were conducted after the same models. At the first annual meeting there was no power to do more than accept or reject the "report," to elect or negative the election of the outgoing councillors who offered themselves for re-election. No power of nomination, or substitution, or amendment belonged to the



EXAMINATION-ROOM OF THE PHARMACEUTICAL SOCIETY OF IRELAND

members. Some practical questions were overlooked; indeed, the quorum of "chemists and druggists," who had no experience in these things, had little else to do than approve and vote "aye." Two important matters which, if done at the time, would have saved the Society much subsequent trouble were (a) the compulsory registration of those who were entitled under the Act to carry on the business of "chemist and druggist" for the term of their natural lives, and (b) the recognition of their apprentices as eligible to come up to the Society's examinations on, at least, a reduced pharmaceutical service. The neglect of these caused the apprentices to open shop in defiance of the law, and ultimately, when strong enough, to force the hand of the Society. If the original suggestion in the Act had been adopted, the

F. Wells, jun., and Mr. Grindley. These gentlemen were an agglomeration of elements which ultimately crystallised by reason of fusion in the electrically charged atmosphere of the Council, and established the shape and direction of the facets which distinguish the Council to the present time. Their dictum was "The Pharmaceutical Society is a society for the licensing of qualified persons only, and for the preservation of the legitimate interests of pharmaceutical chemists, especially of those who are members," acting on which they promoted legislation to hamper all outsiders, and opposed the registration of the druggist-grocers, who clamoured for rights they believed they were entitled to, and which in great part they succeeded in obtaining in 1890. A singular idea controlled the Council



MR. WM. HAYES.



PROFESSOR TICHBORNE.



MR. S. TURKINGTON.



MR. J. MONTGOMERY.



MR. E. P. MURRAY.



MR. E. P. RYAN.

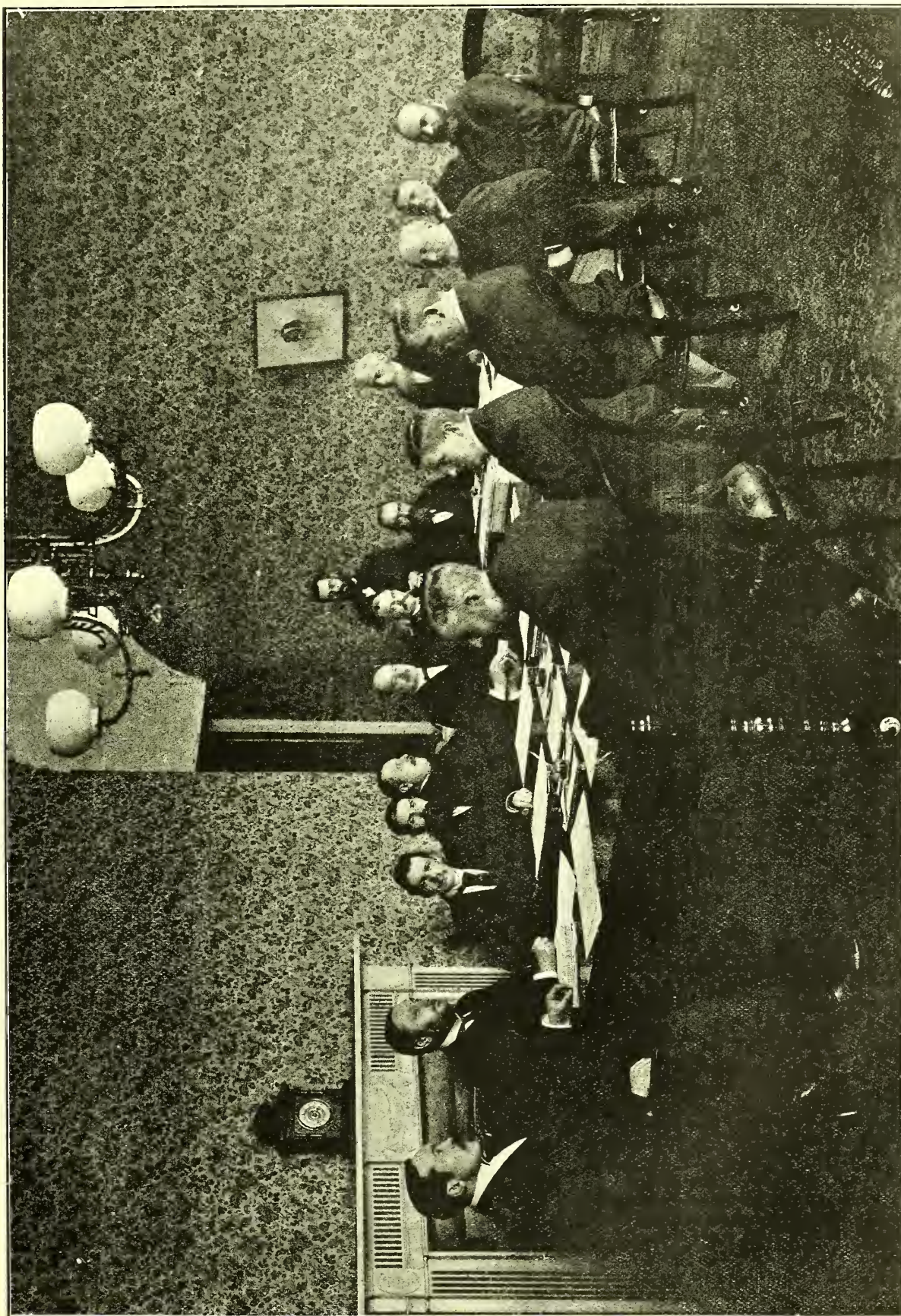
majority might have been absorbed and the remainder controlled.

In 1883 the Society removed to Harcourt Street, and the present Registrar, Mr. Arthur F. Ferrall, was appointed in 1884. Here the Society was only tenant of "a flat." In these rooms the first efforts at effective work were exhibited, and the most exciting scenes in council and general meeting occurred. Evening meetings were held through several sessions, and legislation was attempted and opposed. In 1890, the "School of Chemistry" was established, under the direction of Professor Tichborne, who still, with the assistance of Mr. P. Kelly (also a member of the Council), controls and directs the work of the students.

During this time Mr. William Allen was the leader of the "independent party," in which he was supported by Mr. Wm.

at this time, which no doubt contributed to the growth of the druggist-grocers—namely, that they had no right to prosecute for the illegal sale of poisons, but only for the illegal compounding of prescriptions; that the Poisons Act was the business of the police; so that even when evidence was available it was declined.

The accommodation afforded in these premises was found to be entirely inadequate, after the commencement of the school. There was, consequently, a search for premises which should be more suitable and more worthy of a society charged with such responsible functions, and which might be regarded as a permanent address. After some inquiry the present commodious house was secured, and the interest in the lease purchased, subject to a small head-rent. For this possession the Society is especially indebted to its late



1. Mr. R. McKnight. 2. Mr. Burns. 3. Mr. O'Sullivan. 4. Mr. R. Kelly. 5. Mr. Porter. 6. Mr. R. Simpson. 7. Mr. W. F. Wells. 8. Mr. G. H. Grindley. 9. The President.
10. Mr. G. D. Beggs. 11. Dr. Mernu. 12. Dr. J. A. Walsh. 13. Mr. J. I. Bernard. 14. Mr. H. Conyngham. 15. Mr. W. J. Baxter. (The Registrar is standing.)

COUNCIL MEETING OF THE PHARMACEUTICAL SOCIETY OF IRELAND.

Treasurer, Mr. E. J. M. Hodgson, J.P., who had it much at heart, and kept the want constantly before the Council. Mr. Hodgson was an ideal treasurer. He jealously watched the expenditure of the Council till the funds were available and the opportunity offered of securing such eligible premises in a convenient part of the city.

The exterior of the house is not imposing, and no attempt has been made to improve it, all the Society's expenditure having been devoted to the interior arrangements.

The office is on the left hand of the entrance. There is a good hall, the floor of which has been recently tessellated. At the back of the office, off the inner hall, is the committee-room, in which are also held the Society's evening meetings, and the materia-medica and botany classes (established 1895), for the purposes of which there are glass wall-cases containing materia-medica specimens, and a cabinet containing the illustrations for the botanical lectures.

The council-room is on the "drawing-room" floor at the back of the house, lighted by three large windows. The photograph only indicates about one-fourth of its size, as the council-table and Council were pushed into the corner of the room for the convenience of the lens. The excellent light in the room may be judged from the fact that our photograph was taken on a foggy afternoon as the Council were assembled at 3 o'clock in the month of January without the aid of artificial light.

The Council was a fairly full one that day. Professor Tichborne, Mr. Hayes, and our reporter arrived in time for business, but too late for the photograph. The others absent were Mr. Ryan (Dublin), Mr. Montgomery (Belfast), Mr. Turkington (Cookstown), and Mr. Murray (Clones). Consequent on the varying proximity of the members to the camera, all of them could not be taken at an equal advantage. But the likeness of each is good, and any of them can be easily recognised. The engraving on the wall is that of the first President of the Society.

The examination-hall is a fineroom extending east and west across the whole front of the house, lighted by four large windows; it measures 35 feet by 19 feet, and is 14 feet high. The west end, which is shown in the picture, is the fixture containing the pharmacy stock and utensils for use at the pharmacy examinations. The opposite end has a similar fixture, glazed, containing the materia-medica specimens for the use of the examiners in that subject. The photograph shows the pharmacy examiner (Mr. M. R. Whitla) at his task. A candidate is being examined in prescription-reading, the President and Vice-President acting as visitors, the Registrar, and the vacant chair for Sir George Duffy, M.D., the visitor appointed by the Privy Council, and thirteen candidates working at "the paper." The practical portion of the pharmacy examination is done by the candidates, four or six at a time, on the counter specially built for the purpose, and shown in the photograph. The hall can accommodate twenty-four candidates at separate desks.

This hall is used for the public meetings of the Society, and, when the working-bench is removed, it can take about 150 seats.

Over the examination-hall is the chemistry school, with bench-accommodation for twenty-three students, and, off it, the professors' room. This room is also used at examinations for the practical work of the chemistry portion of the Licence examination. The upper part of the house is occupied by the Registrar, and there are apartments in the house for the use of the hall-porter; besides these there is the basement, at present unappropriated except as a lumber-room, a yard, which may yet be covered, and a good coach-house and stabling, which are waiting the developments of the Society to be appropriated to some useful purpose.

All the fittings and furniture are by the eminent Irish cabinet-makers, Messrs. Strahan & Co., Dublin. The mantel pieces in the examination-hall and council-room are handsome specimens of carved white marble, for which many of the old Dublin mansions are celebrated. It is stated that since the Society came into possession 100% was offered for that in the examination-hall.

Wills of Deceased Chemists.

Mr. Joseph Woodcock, chemist and druggist, Newsham Drive, Liverpool, having died on July 20, intestate letters of administration to his estate have been granted to his widow, Mrs. Mary Anne Woodcock; the personalty is sworn at 1,357*l.* 13*s.*

The will of Mr. Thomas Hunt, chemist and druggist, Grantham, who died on July 16 last, is proved by Miss Harriett Francis Hunt, the sister and sole executrix of the testator, whose personalty is sworn at 1,143*l.* 15*s.* 6*d.* gross and 1,132*l.* 5*s.* 8*d.* net.

The will of Mr. William Mousley, pharmaceutical chemist, Redditch, who died on July 6, 1897, is proved by Mr. Harold Mousley, the son, and Mr. F. W. Hollington, of Redditch, the executors. The personalty is sworn at 986*l.* 12*s.* 1*d.* gross, and 932*l.* 0*s.* 9*d.* net.

The will of Mr. Arthur H. Reckless, pharmaceutical chemist, Ashbourne, Derbyshire, who died on August 7 last, is proved by Mr. Arthur H. Reckless, chemist and druggist, the son, the acting executor of the testator, whose personalty is sworn at 576*l.* 9*s.* 6*d.* gross, and 440*l.* 6*s.* 9*d.* net.

The will of Mr. Robert Farrage, chemist and druggist Rothbury, who died on June 3, is proved by Mrs. Farrage, the widow, and Messrs. W. T. R. and J. H. Farrage, the sons, and Mr. J. P. Ridley, Rothbury, the executors, by whom the testator's personalty is sworn at 4,257*l.* 15*s.* 11*d.* gross and 4,201*l.* 13*s.* 1*d.* net.

Letters of administration to the estate of Mr. John Hemmons, chemist and druggist, 27 Temple Street, Bristol, who died unmarried and intestate on September 16, have been granted to his brother, Mr. William Crofton Hemmons, printer and publisher, Stephen Street, Bristol, by whom the deceased's personalty is sworn at 344*l.* 9*s.*

The will, dated December 11, 1894, of the late Mr. William Cunnell, chemist and druggist, Queen's Square, Wolverhampton, has been proved by Mrs. Cunnell, the widow, who is empowered to carry on the business during widowhood. The testator's personalty is sworn at 1,065*l.* 7*s.* 8*d.*, but there is real property in addition.

The will of Mr. George Frater, chemist and druggist, 36 Addison Road, Newcastle-on-Tyne, who died at Geneva, on August 9, is proved by Mr. Robert Jno. Hoy and Mr. Alexander Morton, both of Newcastle, the executors of the testator, whose personalty is sworn at 830*l.* 18*s.* 1*d.* gross and 530*l.* 10*s.* 9*d.* net.

The will of Mr. F. M. Rimmington, Bradford, who died on June 17 last, is proved by his son, Mr. George Rimmington, pharmaceutical and analytical chemist, Bradford, and his brother, Mr. Cornelius Rimmington, of Selby, and Mr. John Hindle, 24 Bank Street, Bradford; the personalty is sworn at 4,985*l.* 12*s.* 9*d.* gross and 4,897*l.* 6*s.* 7*d.* net.

The late Mr. John Moore Harrison, chemist and druggist 52 Upper Boundary Road, Derby, having died intestate on September 4 last, letters of administration to his estate have been granted to his son, Mr. John Moore Harrison, chemist, 47 Arundel Street, Derby, by whom the deceased's personalty is sworn at 168*l.* 10*s.* 8*d.*

The will of Mr. Thomas Earee, chemist and druggist, Gresham Road, Staines, who died on April 8, is proved by Mr. W. L. Earee, chemist and druggist, 27 High Street, Staines, and Mr. G. W. Earee, 89 Chancery Lane, the nephew. The testator's personalty is sworn at 3,348*l.* 5*s.* 3*d.* gross, and 2,989*l.* 6*s.* 1*d.* net.

Men of Mark.

IN the pages which follow we have briefly sketched the careers of a few men whose work has brought them more or less closely into some association with pharmacists. This, of course, might be said with almost equal truth of a hundred or a thousand other notable names, and it would not be easy to give a sufficient reason for the selection of the dozen here sketched over another dozen who might be suggested. We like to think, however—and we have some reason for our belief—that the gentlemen whose portraits are subjoined are all, in their several ways, friendly disposed towards pharmacy and the people called pharmacists.

ALEXANDER BOTTLE, J.P., M.R.C.V.S., F.C.S.,

"THE FATHER OF THE PHARMACEUTICAL COUNCIL."

A man of 80, mentally and physically alert, jovial, and who rarely misses a meeting of committee or Council—such is Mr. Bottle, whom Mr. Hampson, in 1891, happily called the "father of the Council." Mr. Bottle's connection with the Pharmaceutical Society dates from 1842; he just missed being a founder. At the annual meeting in 1858 he was elected a member of the Council. There was no contested election that year, "because" (in the words of Mr. Jacob Bell, then President) "only the exact number had been proposed for election." The Council, as elected, consisted of the following gentlemen:—

Ballard, Edwin, Farringdon, Berks.
 Bell, Jacob, 338 Oxford Street
 Bird, William Lionel, 42 Castle Street, Oxford Street.
 Bottle, Alexander, 37 Town Wall, Dover.
 Brew, Thomas A., 71 Earl Street, Brighton.
 Bucklee, William Henry, 86 New Bond Street.
 Davenport, John Thistlewood, 33 Great Russell Street.
 Deane, Henry, Clapham.
 Edwards, George, Dartford.
 Edwards, John Baker, 42 Berry Street, Liverpool.
 Hanbury, Daniel Bell, Plough Court.
 Hollier, Elliott, Market Place, Dudley.
 Macfarlan, John F., 17 North Bridge, Edinburgh.
 Meggeson, George, 64 Cannon Street.
 Moore, James Lodge, 1 Craven Street.
 Morson, Thomas, N. R., 19 Southampton Row.
 Peacock, Hamerton R., 170 High Street, Poplar.
 Sandford, George Webb, 47 Piccadilly.
 Squire, Peter, 277 Oxford Street.
 Standing, Thomas, 1 Piccadilly, Manchester.
 Waugh, George, 177 Regent Street.

Of all these men only three survive—Mr. Bottle, Mr. Davenport, and Mr. J. B. Edwards (who is now in Canada). Mr. Bottle's service as a councillor has been continuous since 1858, and this period of forty years is a record, no past or present councillor approaching him by a decade. Mr. Bottle served as Vice-President of the Society under the late Mr. Thomas Hyde Hills for three years, from 1873 to 1876, and again under Mr. Carteighe for four years, from 1888 to 1892.

In 1890 Mr. Bottle completed the fiftieth year of his business career as a pharmacist. He commenced business in the present premises in Town Wall Street in 1840; but the fact did not seem to be known to his Dover colleagues, who then entertained him to dinner, that in the year before—viz., in 1839, he qualified as a member of the Royal College of Veterinary Surgeons. In those days the veterinary examinations were conducted by a board mainly composed of eminent medical men, Sir Astley Cooper being Chairman, and it was in the Chairman's house that Mr. Bottle was examined. His M.R.C.V.S. certificate is signed, Astley Cooper, J. A. Paris (the author of "Pharmacologia"), Joseph Henry

Green, Richard Bright (a name perpetuated to us in Bright's disease), Edward Stanley, and Wm. Sewell (Professor). The Pharmaceutical Society had no examinations when he joined, otherwise Mr. Bottle would have passed them; for he was a good student of science, and was particularly well up in chemistry. As early as 1846 he lectured to his fellow-townsmen in Dover on coal-gas, with the immediate result that the gas-lighting of the town was much improved. Later and for many years he acted as gas-examiner—in fact,



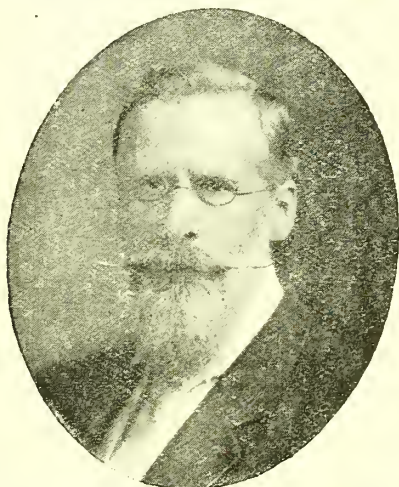
when sound opinions regarding scientific matters were wanted by Dover people they seemed naturally to turn to Alderman Bottle. He was elected a Fellow of the Chemical Society twenty-five years ago. On the Pharmaceutical Council Mr. Bottle is very highly respected. He is not a stickler for precedent, but his experience of forty years' business, and clear recollection of it, is of immense assistance to his fellow-councillors. He rarely makes speeches, but there is no one at the table who is quicker to pick out a slip or question a policy. His sentence or two, spoken quietly but weightily, are as effective as a lively speech would be from most men. His fellow-councillors showed their appreciation of him in 1891 by having his portrait painted and hung on the Council chamber walls, and, at the same time, he received from them a set of diamond studs. Mr. Bottle is the only Vice-President of the Society who has received the honour of official portraiture during his term of office. He comes of a long-lived race, and we may yet have the privilege of recording the completion of his Jubilee as a pharmaceutical councillor.

SIR WILLIAM CROOKES, F.R.S., &c.,

PRESIDENT OF THE BRITISH ASSOCIATION.

New elements, diamonds, the spectroscope, and spiritualism come equally handy to Sir William Crookes. He is an intensely imaginative man, and, unlike the nine hundred and

ninety-nine who have allowed their imagination full play in scientific matters, he has got good from the gift. Imagination and side-issues are equivalents to him, and his record consists greatly of side-issues. He learnt his chemistry under Hofmann, in the Royal College of Science, and, as a young man in his teens, was set to work to analyse a chimney deposit, in which he found something that most people would not have bothered about, but he worked at the thing until he brought thallium to light from it. This he placed in the table of elements, then pursued some spectroscopic fancies which had fired his imagination when he was proving that thallium is an element. There were chemists who would not listen to what the young fellow said, and the labour spent in doing things that would convince them was good practice—especially in the mysteries of spectroscopic revelations. Spark spectra made him a keen electrician, and the study of the high vacua which he sparked led to one of the most brilliant conceptions of modern times—radiant matter. The Crookes tube, which gives x rays, issued from that research, and the only thing he seems to have missed was the x rays themselves. Probably this was because he became interested at the time in the manufacture of incandescent electric lamps and spiritualism. Spiritualism was a legitimate side-issue to his research. Why? Because he is a thorough believer in the undulatory theory. His conception is that various phenomena, such as light, electricity, and x rays, are vibrations of ether differing in amplitude and rapidity—the one a multiple of the other, as it were—and he fancies there are vibrations so tenuous that they can be felt by anybody who is specially sensitive to them. Thought-waves there may be, and another brain resembling the brain from which the waves emanate is not unlikely to catch the message which the one sends, consciously or not, to the other. There is telegraphy without wires; why not thought-transference without speech? Admit that, and spiritual manifestations are within the region of possibility. Rare earths were also a side-issue to the thallium research, and they have led Sir William Crookes into remarkable discoveries and declarations; for example, he says all elementary atoms may not be of the same size or weight, and that we have in nature elementary bodies



From a photograph by Elliott & Fry, Regent Street.

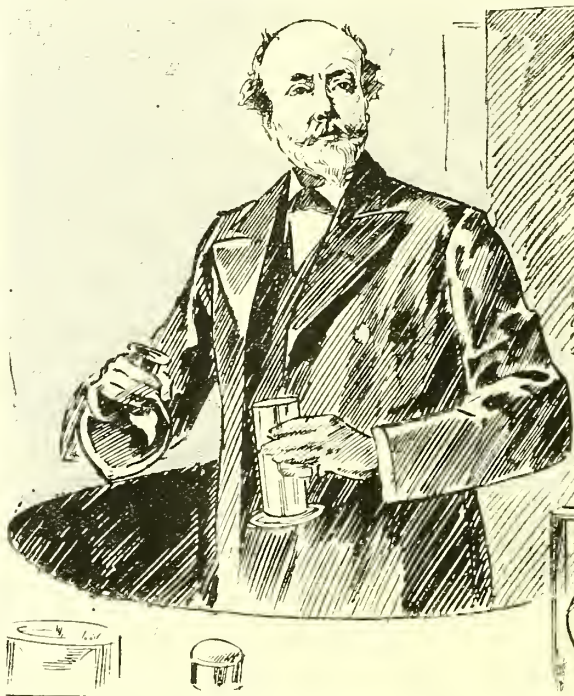
which were not finished at the Creation—these are the meta-elements. He believes that evolution began when the earth condensed from nothing or protyle into the nebulous state, and he gave the British Association twelve years ago a fascinating description of the genesis of the elements. It was more than plausible. In the Jubilee list he appeared as

"Professor Crookes," and he has long been called so by many, but not by himself, on the strength of an early scholastic appointment at Chester. "Sir" suits him better and he is worthy of it. He is editor and proprietor of the *Chemical News*, which he loves, and into which he admits the views of peculiar people, such as Emmens, knowing well that most great discoverers have been considered somewhat cranky early in life. He may sometimes "entertain an angel unawares." He is often seen in the City, being much sought after by technical enterprises which solicit his presence on directorates. He was President of the Chemical Society in 1837-39, and has filled the same position in the Institute of Electrical Engineers. His address as President of the British Association, if we may prophesy from his past achievements in this line, will cause a stir.

JAMES DEWAR, M.A., LL.D., F.R.S., PRES.C.S.,

ADEPT IN LOW TEMPERATURES AND HIGH EXPLOSIVES.

The President of the Chemical Society is a many-sided man. He is at Cambridge just now performing his duties as Jacksonian Professor of natural and experimental philosophy



in the university there. To London he is best known as Fullerian Professor of Chemistry at the Royal Institution, and as associate with Sir William Crookes in the examination of the London watersupply. With Sir Frederick Abel he shares the distinction of having invented cordite, the smokeless gunpowder with which British soldiers try to shoot Afridis, Gandese, and all others who come in their way. He hails from Edinburgh, and learnt his chemistry there under Professor Lyon Playfair, the only commoner-chemist who has ever been made a peer. Mr. Wanklyn was Playfair's assistant then, and by-and-by Mr. Dewar became sub-assistant. Afterwards he went to Ghent to study under Kekulé. He tried a little organic research then—in fact, he tickled various spots on the field of chemistry, when he returned to Edinburgh (1863) as principal assistant. He came to Cambridge in 1873 and succeeded

Dr. J. H. Gladstone at the Royal Institution in 1897. In 1877 he got his F.R.S. for exceptional powers in research, especially in the determination of physical constants. He was one of the first in this country to appreciate the importance of the theory of dissociation, and lectured to the Chemical Society on the subject in 1874 and 1882. He now confesses to being a little behind the times on the subject in its modern dress, but it is difficult to imagine that when one listens to him speaking on the ionisation theory. He knows all about meteorites—after they have arrived here—and is not much concerned about where they come from. Lately—that is, for nearly twenty years—he has been working at low temperatures, and, by the help of liquid oxygen, has upset a lot of cherished chemical notions. At first, when he liquefied atmospheric air, everybody thought it was a mere plaything he was dealing with, but all the time he and one or two physicists were experimenting in various directions with the cold liquids, and they have greatly enriched the higher branches of physics thereby. Posterity will feel the benefit of their work. The low-temperature research has called for ingenuity and courage, as well as knowledge, and Professor Dewar has not been found deficient in any. He is a good lecturer and successful experimenter. This is a portrait of him which we did not use when he lectured before the Prince of Wales a year ago. He is assuring "his Highness" that "all we have to fear is an explosion." Some will think there was wit in that, but a Scotchman, with the Heir to the Throne before him, does not crack jokes. Professor Dewar is loved by his friends, and he has many. Some there are who show the opposite characteristic in a pronounced manner. They tried to prevent him being elected President of the Chemical Society, an unprecedented thing in the history of that body, and—well, he is President, and a success as such. He has forensic skill, which is shown chiefly in the witness-box on subjects like aniline-dyes, incandescent lights, and explosives. He did not find argon, but has liquefied fluorine, and his work is recorded mainly in the Royal Society's Proceedings and at the Patent Office.

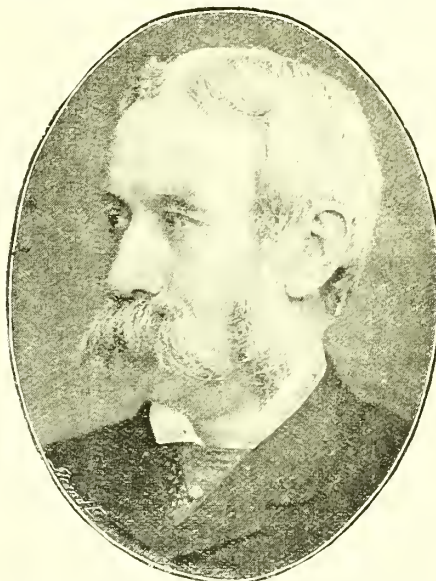
DR. ROBERT FARQUHARSON, M.P., LL.D.,

SPONSOR OF PHARMACY BILLS.

Dr. Farquharson has been in Parliament, as member for West Aberdeenshire, since 1874, and during that time he has always been depended on by the Council of the Pharmaceutical Society as the pilot of their Bills through, or rather into, the House of Commons. It is likely that his aid will be again invited this year for the modest little measure lately adopted.

This connection with pharmacy on the official side is balanced on the commercial side by his directorship of Bovril (Limited). He is a therapist of note, studied at the Edinburgh University, where he graduated M.D. in 1858. He also studied in the Berlin, Paris, and Vienna clinics. He is a man of military bearing, accounted for, perhaps, by his having been a surgeon to the Coldstream Guards for some years; he was also medical officer to Rugby School, and on the staffs of several London hospitals, the most important of his appointments in this respect being the lectureship in materia medica in St. Mary's Hospital Medical School. He wrote a "Guide to Therapeutics" which has gone through five editions. It is distinguished from most of the works on this subject by its excellent pharmacy, thanks to "my friend Mr. Carteghe, of Dinneford & Co.'s, New Bond Street." Dr. Farquharson was President of the Sanitary Congress this year, and has the unusual distinction of being the only

living man who has resigned the Fellowship of the Royal College of Physicians (London). He does not now practise as a physician, his parliamentary and directorial duties pro-



From a photo by Russell & Sons, Baker Street.

bably furnishing him sufficient occupation, while in Scotland he has flocks and herds which a patriarch might envy. They are very proud of him Aberdeen awa', and the University made him a doctor of laws.

ROBERT GIBSON, Ph.C.,

LORD MAYOR OF MANCHESTER.

While this issue of THE CHEMIST AND DRUGGIST is being printed (a day earlier than our usual time) an event of pharmaceutical interest is occurring in Manchester. The pharmacists of that city are gratified that a gentleman whom they all know, and whom they fairly regard as one of themselves, though he does not now compete with them directly, should be this year filling the civic chair of Manchester. We shall not attempt to guess at what the proceedings may be, but as we are compelled to delay our report till next week we take revenge by including Mr. Gibson among our "Men of Mark" this week.

The Right Hon. the Lord Mayor of Manchester (Alderman Robert Gibson), whose portrait accompanies this article, is a good example of that class of men who, from humble surroundings and comparatively obscure parentage, rise by their own industry and perseverance to occupy influential and distinguished positions. Alderman Gibson, in addition to the calls of a steadily growing business, has, during the last twenty years of his life, devoted a large amount of his time and energies to the public service. Lord Mayor Gibson was born at Carlton-upon-Trent, in February, 1832, and there received such education as a good village school affords. When 8 years of age he had the misfortune to lose his father, who farmed some land in the district, and five years later—in 1845—he was apprenticed to Dr. Pettinger, of Sutton-upon-Trent (afterwards of Manchester), who also had a chemist's shop at Newark, where young Gibson spent most of his time. In 1850 Mr. Gibson went to Manchester, and for two or three years was an assistant with Messrs. Mottershead & Roberts, in St. Mary's Gate. In 1854 he opened a retail chemist's shop in Preston Street, and thirteen years later purchased a small building in Erskine Street, where he commenced the business of medicated-lozenge manufacturer. The rapid increase of the business rendered it necessary to enlarge the premises,

and this was done by the purchase and alteration of a number of adjacent cottages. Further extension subsequently took place, and ultimately Mr. Gibson built the large works which the firm now occupy.

From the time that Mr. Gibson began business in Hulme he has taken an active interest in every municipal and parliamentary election in the district. On the elevation of Mr. Councillor Schofield to the aldermanic bench, in 1882, Mr. Gibson was elected a councillor to represent St. George's Ward, and in 1893 was elected an alderman in the City Council. The Lord Mayor has done much useful work in the Council, having served on the Health, Parks, Baths, Free Libraries, Watch, Waterworks, and Gas Committees, and he now holds the office of Chairman of the Gas and Town Hall Committees.

A practical reformer, the Lord Mayor has done good work in the Council, and has carried many practical and useful measures.

In politics Mr. Gibson has always been an ardent Liberal. He was for eight years a member of the Stretford Local Board, and held the position of Chairman for two years. During his chairmanship the question of the amalgamation of the out-townships was under discussion, and, being at the same time Chairman of the Board and a member of the City Council, his position was a somewhat difficult one; but he received high praise for the absolute fairness and impartiality which he had observed throughout the proceedings, and on his retirement from the Board many were the complimentary allusions to the services he had rendered the district.

Mr. Gibson took an active part in the formation of the Hulme and Chorlton Parliamentary Debating Society, and for four sessions he acted as "Speaker." He has also been an active worker in connection with St. Bride's Church, Old



Trafford, of which he was the first churchwarden. He acted in this capacity for a number of years, and on his retirement was presented with an illuminated address, which testified to the esteem in which he was held by the officers and congregation.

The Lord Mayor is a large employer of labour, and is as much respected by his employes as by his large circle of friends, who know him as a genial companion, open-hearted and free from anything appertaining to narrow-mindedness.

The Lady Mayoress was a daughter of Mr. George Chambers, wine and spirit merchant, of Newark. There are three sons all married. They are to-day the practical managers of their father's firm. On attaining his sixtieth birthday, which was celebrated two or three years ago, the Lord Mayor entertained the whole of his workpeople, some 130 hands, to a dinner, after which he informed them that although he had not retired from the business, yet for all practical purposes the management of the firm would in future be in the hands of his sons. He also remarked at that time that, while he could not pretend that his sons were better than other people's sons, they had a record of which he was very proud. His sons had lived with him from birth until marriage, and although they now had wives and homes of their own, the day had yet to come when either of them should give him the first word of disobedience.

A few weeks ago the Lord Mayor was entertained at a banquet by the members of the Old Trafford Bowling Green Club, of which he has been President fourteen years, and was presented, on behalf of his wife, with a solid silver tea-service, valued at 90*l*.

ERNEST TERAH HOOLEY, THE MANIPULATOR OF MILLIONS.

Mr. Hooley's exploits in the world known to the Stock Exchange do not directly concern us, but we include his



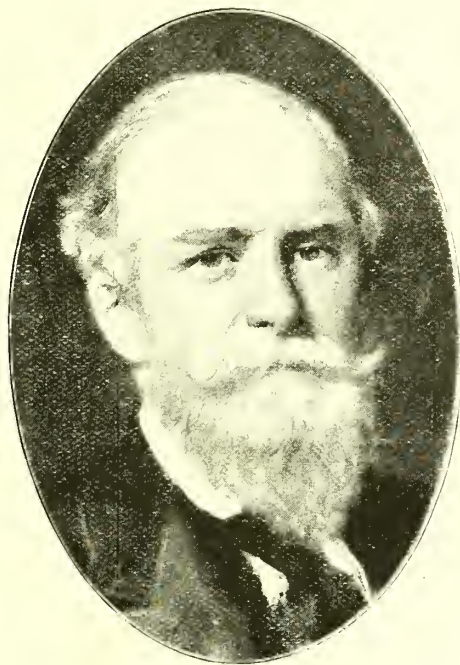
From a photo by Russell & Sons, Baker Street.

portrait in this series because he has more than once put his financial foot on our domain. His sensational purchase of Bovril and reconstitution of the company some eighteen months ago, and more recently his flotation of Schweppes as a public company, are the most prominent instances of his pharmaceutical enterprise. It has been stated that Mr. Hooley is very desirous to own a pill, and he has certainly negotiated with one of the popular ones, and has been reported to be in treaty with quite a number of proprietary medicines.

SIR JOHN LUBBOCK.

Sir John Lubbock has devoted himself so assiduously of late years to the amelioration of the tradesman's life by the limitation of his hours of labour that some of the younger generation may possibly need reminding of the many other departments of human interest in which he has pre-

viously distinguished himself. He has been a member of the House of Commons for a generation, and at present fills one of the most honourable seats which the country has to bestow—namely, that for the University of London. Pre-



viously Sir John Lubbock had represented the county town and subsequently the Maidstone division of Kent, the county in which he resides and where he was born. His defeat on political grounds in that division gave the University of London the opportunity of honouring itself by selecting its then Vice-Chancellor as its member. Sir John Lubbock is an ideal university member, and yet, curiously enough, he is not a university graduate. He went to Eton, but at the age of 14 was placed on a stool in his father's bank in Lombard Street, of which he is now the head. It is more than likely that a university training would have diverted that fine intellect from its natural bent. With it Sir John Lubbock would have certainly taken all the degrees available to students, but without it he has won for himself, by researches which have been admired by all competent critics, the D.C.L. of Oxford, the D.C.L. of Cambridge, the LL.D. of Cambridge, Dublin, and Edinburgh, and, of all things, the M.D. of Würzburg. The presidential chairs he has occupied would furnish a house. He has been President of the British Association, of the Linnæan Society, of the Ethnological Society, of the Entomological Society, and of the Anthropological Institute. He was the first Chairman of the Institute of Bankers, the first Vice-Chairman of the London County Council, and its Chairman on the resignation of Lord Rosebery. He has been President of the London Chamber of Commerce, of the Corporation of Foreign Bond Holders, and of the London Working-men's College. He has been on half-a-dozen Royal Commissions, and was Chairman of a Parliamentary Committee which settled the designs of our present coinage. He has written books on "Prehistoric Times," on the "Origin of Civilisation," on the "Origin and Metamorphoses of Insects," on "British Wild Flowers in their Relation to Insects," on the "Thysanura and Collembola," and, most famous of all, a work on "Ants, Bees, and Wasps," in which he recorded his patient studies of these insects, a revelation to most readers. Besides these, he has published

his lectures and addresses, a charming little work on "The Pleasures of Life," and innumerable papers in the journals of the scientific societies we have named. He has never been an inactive member of Parliament, as some twenty statutes, including the Bank Holidays Act, the Shop Hours Act, and a couple of Medical Acts testify. Had he been a more violent partisan he would probably have become a Cabinet Minister, but as a strong partisan he would hardly have been chosen member for London University. Few men have such a record of sound work behind them as Sir John Lubbock, few have worked more disinterestedly and in such a varied manner, and he may yet round off his career as Chancellor of the Exchequer, unless an intimate knowledge of finance should be a disqualification.

Our portrait is a copy of the painting by the Hon. John Collier, which is hung in the London County Council chamber. It is a fine painting, but it is not the best likeness of Sir John Lubbock we have seen.

JOHN A. R. NEWLANDS,

THE DISCOVERER OF THE PERIODIC LAW.

Many English chemists have felt that a little less than justice has been meted out to John Newlands in respect of the discovery of the relations between the elements generally known under the title of the Periodic Law. It is not necessary to detract from the fame of Mendeléef, who, no one doubts, came to his conclusions independently and without any knowledge of previous speculations on the same subject, but it is a simple chronological fact that Newlands preceded him by some five or six years. Mendeléef first published his "Attempted System of the Elements, Based on their Atomic Weights and Chemical Analogies" in the beginning of 1869; Newlands contributed his first article "On Relations among the Equivalents" to the *Chemical News* of February 7, 1863. Mr. Newlands subsequently developed his idea, and on March 1, 1866, read a paper before the Chemical Society entitled "The Law of Octaves, and the Causes of Numerical



Relations among the Atomic Weights." Mr. Newlands aimed to show that by arranging the elements according to the atomic weights on Cannizzaro's system a number of singular coincidences were presented, especially that each eighth element (or it might be sixteenth, &c.) presented

characteristics which seemed to be a repetition of its predecessor eight times removed, thus suggesting the idea of a law of octaves. The speculation was not very favourably received, and the paper was not printed in the Society's *Journal*, but in 1873, when Mendeléeff's and Lothar Meyer's systematisations of the elements had begun to attract attention, Mr. Newlands called the attention of the Chemical Society to his previous paper and also to his antecedent publications. The President (Dr. Odling) stated that the reason why Mr. Newlands' paper had not been published by the Society in 1866 was that the Society made it a rule not to publish papers of a purely theoretic nature, since it was likely to lead to correspondence of a controversial character—a rather weak explanation, inasmuch as Mr. Newlands' note was occasioned by the publication in the *Journal* of a theoretic paper by Lothar Meyer.

It would be out of place in this short note to discuss in detail the comparative merits of Mendeléeff's and Newlands' conception, and it should be mentioned that it was afterwards discovered that even Mr. Newlands had been anticipated in a sense by a Frenchman named De Chancourtois, who a few months before his first paper had published an arrangement of the elements in the form of a spiral diagram, which he entitled *ris tellurique*. We may also add, to complete this part of the history, that something approaching justice was done to Mr. Newlands by the award of the Davy medal to him by the Royal Society in 1887 "for his discovery of the Periodic Law."

A conversation with Mr. Newlands on chemistry problems is as refreshing and instructive as with some chemists it would be wearisome and obscure. He certainly harbours no resentment against his Russian rival, whose great abilities and services he fully appreciates; and in the course of a recent talk on the subject Mr. Newlands showed us a very cordially expressed New Year's greeting he had just received from Mendeléeff.

John A. R. Newlands was born in Southwark in November, 1837. He was the second son of the Rev. William Newlands, M.A., of Glasgow, and his mother was of English birth but of Italian descent. His first acquaintance with chemistry was acquired by attending some scientific lectures with a friend at Charing Cross Hospital. These influenced him in choosing chemistry for his career, and in October, 1856, he became a pupil of Professor Hofmann's at the Royal College of Chemistry. The next year he got an appointment as assistant with Professor Way, then and for some time after consulting chemist to the Royal Agricultural Society of England.

But young Newlands was an enthusiast as well as a chemist, and consequently when, in 1860, Garibaldi was marching on Naples, and called for English volunteers, John Newlands was one of the first to join him. He was with Garibaldi's force through the campaign, and took part in the action outside the walls of Capua. Having thus given his Italian blood a canter, he came back to London, and submitted to his Scotch sense once more. He resumed his assistantship with Professor Way until, in 1864, he established a laboratory on his own account in the City. For some years he held chemistry lectureships at St. Saviour's Grammar School, Southwark, at the Ladies' Medical College, and in the City of London College.

In 1868 he acted as chemical manager to an Anglo-German Phosphate Company, and from the end of 1868 till 1886 he was chemist to Mr. James Duncan, the well-known sugar-refiner, of whose refinery his brother, Mr. Benjamin Newlands, was for the greater part of the time manager. During this period the so-called alum process for the purification of low syrups was invented and carried into operation;

and also various schemes for the removal of iron from syrups, the manufacture of sulphate of alumina from bauxite without any apparatus beyond an ordinary superphosphate mixer, &c. Foreign competition closed this refinery in 1887, and since that time Mr. Newlands and his brother have carried on their old profession as analytical and consulting chemists at 2 St. Dunstan's Hill. He has written on other subjects besides atomic weights, including some spirited verses on Italian freedom and British reform. He is the author, conjointly with his brother, of a well-known treatise on "Sugar: a Handbook for Sugar Growers and Refiners" (Spon), and contributed articles on sugar and sugar-refining to Thorpe's Dictionary.

WILLIAM HENRY PERKIN, PH.D., LL.D., F.R.S.,
F.C.S., &c.,

FOUNDER OF THE ANILINE-DYE INDUSTRY.

Dr. Perkin's discovery of the first aniline dye—mauve—merits the above title. As a scholar at the City of London School, he had an inordinate love of chemistry, and the teacher advised him to stick to the science. So he went as a student to the Royal College of Science, of which Dr. A. W. Hofmann was principal. This was in 1853, and Dr. Perkin was a lad of 15. He made good progress, and within two years was Dr. Hofmann's assistant in the research department. All the world has been told that it was while in that capacity that he made his famous discovery; it really did not happen in the college, but at his own home, where he was continually experimenting in his spare time. The subject of his research was quinine; he wished to make it artificially, but never succeeded, because he discovered



W. H. Perkin

mauve instead. The dye is sometimes called "aniline purple. Hofmann's help was great, no doubt, and he was able to assure his young assistant (Dr. Perkin was then not yet 18) that he had hit on a good thing. The discoverer patented it, went to Pullar's dye-works at Perth to try it, and came back full of hope and encouragement from the

fair city. With his father and brother he, in 1856, erected works on the Grand Junction Canal, at Greenford Green, Middlesex. He had just turned 18 then: we emphasise this because it was an unparalleled venture. The lad probably did not know what he was about—he had to find his raw materials, invent plant, devise processes, in fact create everything. This was a new industry then; to-day it is a great one established both in England and Germany, and its by-products are altering the phase of therapeutics. In 1857 Perkin & Sons were selling the dye to silk and cotton spinners, and by 1873 Dr. Perkin retired from technical work a successful man of business.

That is the condensed history of how a boy's discovery was worked to success by himself. It is one of the most momentous things in science, and is doubly significant from the fact that no more modest and retiring man than Dr. W. H. Perkin can be conceived. He has more the air of a scientific recluse than a successful man of business, and his whole career supports the former view, for from March 1856, when he joined the Chemical Society, and read his first paper to it, to the present time he has not ceased to prosecute scientific research. We cannot print the titles of his researches, as they would occupy a page or two, but we may indicate generally what they have been about. He was the first to make anthracene by a workable and economical process, which was carried out with success at the Greenford Green Works in 1869. The decline of madder began then, and his discovery, soon after, of anthrhopurpurin, which exists in madder and gives brighter scarlets than anthracene, was also of much value to dyers. Whether his early longings in regard to quinine gave him an affection for medicinal chemicals, or not, we cannot say, nevertheless he has done much in regard to articles which interest the drug-trade. In 1867 he published a paper showing that salicylic aldehyde is a phenol as well as an aldehyde, and this became the starting-point for a series of researches which resulted in the synthesis of cumarin, and continuance of the research led to the discovery of a reaction between benzaldehyde and acetic anhydride which results in the formation of cinnamic acid. This last was soon found to be a general reaction—*i.e.*, any aldehyde reacts with the anhydride, and the product varies with the aldehyde taken. Dr. Perkin seems to be able to do anything he likes with acetic anhydride, and this reaction of his has had immense creative influence upon industrial chemistry. But perhaps the most wonderful work he has ever done has been on magnetic rotation. Thirty years ago, walking through Greenford Green Works, one of Dr. Perkin's colleagues showed with pride a coil which gave an abnormally long electric spark. His work on magnetic rotation had then begun apparently, and not until he communicated his remarkable monograph on the subject to the Chemical Society last session did he take breathing time in the observations which have helped to formulate a new law in chemistry, *viz.* that the magnetic rotation of bodies of the homologous series varies in a definite manner with each addition of CH_2 . There has been much in the research besides this for the guidance of experimenters in all branches of chemistry.

Many honours have been conferred upon Dr. Perkin. He was made an F.R.S. before he was 30, and three years later (1869) became an hon. secretary of the Chemical Society, only resigning the office when he became president in 1883. He was president of the Society of Chemical Industry in 1884-85. Wurzburg University gave him the honorary degree of Ph.D. in 1882, and St. Andrews University has followed with the LL.D. He is rich in medals: the Royal and Davy Medals of the Royal Society; Longstaff Medal of the Chemical

Society; Albert Medal of the Society of Arts; and Birmingham Medal of the Gas Institute are those which he prizes most. It is not the least noteworthy characteristic of Dr. Perkin that while he has been labouring so well for science he has been always ministering in philanthropic and religious work, especially in the neighbourhood of Sudbury and Harrow; this work of his is well known to his neighbours, but not to the world. Two of his sons have also distinguished themselves in chemistry, and the elder, Professor W. H. Perkin, jun., F.R.S., is Schorlemmer's successor in the chair of organic chemistry at Owens College, Manchester.

ERNEST SOLVAY,

WHO HAS MADE SOAP AND PAPER CHEAP.

Never was such an epoch for stimulating inventions as the years of trial which followed the French Revolution. The Republic, which "had no need of savants" and martyred Lavoisier, soon demanded them. Steel-processes, the manufacture of saltpetre, beet-sugar, and the Leblanc method of making alkali were the outcome of the dire necessity of France in a state of practical blockade. The Committee of Public Safety demanded impossibilities, and men came forward and performed them. Leblanc was a surgeon who in his younger days had attended lectures on chemistry at the College of Pharmacy, and he devised the ingenious process which held the field against all comers for three-quarters of a century. Leblanc's alkali-process is not dead yet, but in Ernest Solvay, the Belgian chemist, it has met its most powerful antagonist. He was born at Rebecq-Rojurn, and his father was a salt-refiner, a man of some means. Early in his career he was taken by an uncle, who was a manager of gasworks at St.-Josse-ten-Noode, and made sub-manager. He was always experimenting, always inventing. But the great work of his life seems to have been suggested by his double early training, handling salt in his father's works and ammonia in his uncle's. He began to see the possibilities of their combination, and one day he was powdering carbonate of ammonia in a mortar, and poured into the mortar a solution of salt. The mixture thickened, and Solvay thought he had attained his end. He patented his discovery on April 16, 1861, got funds from his relations and set up a factory.

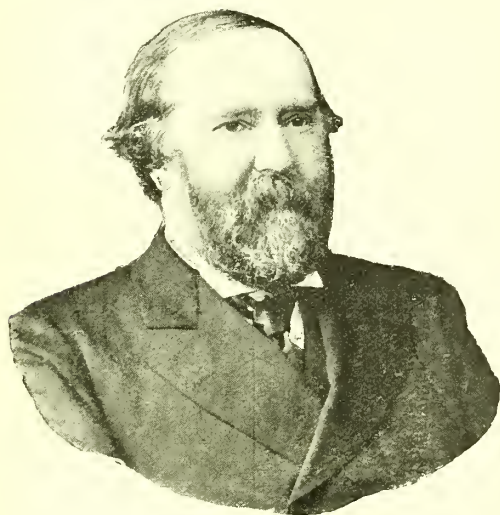


His brother Alfred joined him, and the two worked long and patiently against numberless discouragements, among which were the gradual discovery that their ideas had all been anticipated by chemical-workers through the century. Thorn

in 1837, Hemming in 1838, Waterlow in 1840, Muspratt, Deacon, Gossage, and other English chemists, besides numerous foreigners, had all patented processes more or less similar; but the Solvays worked on. Altogether, it is said, they sank a million and a half of francs. = 60,000%. The invention which enabled them to turn the corner and secure the gigantic success which was ultimately theirs was that of the carbonating-column. This was patented in 1867; at the end of that year the Solvay works were producing 3,000 kilos. of soda per day. At this day the Solvay process is used in great factories in England, France, Germany, Austria, Russia, and America, as well as in Belgium, and is estimated to produce altogether 500,000 tons of soda annually, or more than half of the world's consumption. The price of soda has fallen to one-fourth what it was when Solvay began his experiments, and the consumption has trebled.

SIR THOMAS GRAINGER STEWART, M.D., LL.D., &c.,
PRESIDENT-ELECT OF THE BRITISH MEDICAL
ASSOCIATION.

The B.M.A. does things by halves. When it elects one President it allows his predecessor to hold on for a year, until he introduces his successor at the next annual meeting. This rule should bring Dr. Ruddock from Montreal to introduce Sir Thomas Grainger Stewart to an Edinburgh audience. There are few better-known men in Edinburgh medical circles. He is Professor of the Practice of Physic and Clinical Medicine in the University there, where he graduated, by the way, as M.D. in 1853, the same year as another of our men of mark, Dr. Farquharson. When the Professor was knighted many of those who knew him intimately wondered how the Queen would address him. He was, and is, one of her physicians in ordinary for Scotland, and was known to her and everybody else as Dr. Grainger Stewart. But the Christian name was not dropped. Sir Thomas is a successful consultant and a wealthy man. As a professor and clinician he is noted for the thoroughness of his teach-



ing, and especially the instruction which he gives in the art of diagnosing. He is skilled in brain-troubles, but Bright's disease is what he knows most about, and few in the world know more. He is a man of great dignity of bearing, of cultured thought, and fluent speech. He has considerable experience in presidential work, having acted

as President of the Royal College of Physicians, Edinburgh, and of the Edinburgh Medico-Chirurgical Society.

SIR JAMES WILLIAM WHITTALL.

Sir James William Whittall, whose knighthood was announced on New Year's Day, 1898, is the head of a firm in Constantinople which is well known to British opium buyers, though opium is only one of the articles in which Messrs. J. W. Whittall & Co. deal. To ourselves Messrs. Whittall & Co. are specially known as authorities on Turkey opium, as they have at times favoured us with valuable information which has appeared in our trade reports.

Sir James William Whittall was born at Smyrna on December 1, 1838. His father, James Whittall, and his grand-



father, Charlton, a member of the old Levant Company, had been merchants in Turkey since the beginning of the present century, and their firms, which have uninterruptedly represented the largest British mercantile interests in the Levant, are now continued in the fourth generation. In the year 1861 Mr. James William Whittall joined the eminent firm of J. C. Harter & Co., of Manchester, and remained one of its leading partners till 1873, when he was forced by ill-health to leave England. He then took up one of the branches of his old firm at Constantinople and established himself there, where his business, under the title of J. W. Whittall & Co., rapidly became the leading one of the city. Sir James William Whittall founded the British Chamber of Commerce of Turkey many years ago, and has been its president ever since. He has also acted for three years past as President in Constantinople of the Armenian Relief Committee, and it is to him and his committee that is largely owing the organisation which has enabled some 250,000. to be distributed effectively in the wildest and most scattered regions of Asia Minor. Sir James relieves his more serious work by many occupations which indicate his English origin. He is famous with both the rod and the gun, and is besides a keen yachtsman. He is also known as a collector, and has made noteworthy collections of such *articles de vertu* as antique jewellery, embroideries, &c.

Royal honours, it seems to us, are never more worthily conferred than on men who, like the subject of this notice, are maintaining the fame of British commerce in foreign lands.

Medical Gleanings.

GLANDULAR ENLARGEMENTS.

IN a paper recently communicated to the Edinburgh Medico-Chirurgical Society Dr. A. G. Miller, speaking of chronic glandular enlargements of the neck, submitted three aphorisms for the practitioner's guidance, viz.:—(1) Glandular enlargement has always a cause, which should be sought for and removed if possible. (2) If the cause be not removed the enlargement will persist, and such persistence may give occasion to tuberculosis. (3) Persistent enlargement, after removal of all discoverable causes, generally means tuberculous infection or a pretuberculous condition; therefore all persistently enlarged glands should be excised.

ASTHMATIC COUGH.

THE cough of asthma is always accompanied by an abundant expectoration after the attack of asthma has ceased. During the attack the cough is dry, short, and hacking, and the patient suffers greatly for the want of breath. To shorten the asthmatic grip break a bead of amyl nitrite in a handkerchief and allow the patient to inhale it, or give two drops of a 1-per-cent. solution of nitroglycerine in a teaspoonful of water. One-twentieth of a grain of strychnine in a teaspoonful each of syrup of hypophosphites and hydriodic acid, four times a day, gives very good results.—*Dr. T. J. Mays (Philadelphia)*.

PROLAPSUS ANI.

FOR this annoying trouble Mr. Frank Elvy, M.R.C.S., &c. recommends in the *Lancet* the use of a full-sized Tait's cervical dilator. After replacing the prolapsus with the finger the vulcanite uterine dilator is lubricated and inserted for 1 inch up the rectum and is retained in position by a collar of dentists' wax (Stent's composition) supported by cotton wool and a firmly-applied T bandage. The pessary not only prevents a descent of the swelling while in position, but by its pressure it favours absorption of the œdema and it empties the engorged veins; it should be inserted at night and retained until the following morning. This treatment brings about a complete cure.

FOR NIGHT-SWEATS.

To the large number of remedies used in the treatment of excessive sweating, especially in phthisis, an addition has lately been made in camphoric acid. Dr. Ralph Stockman and Professor H. A. Hare both speak highly of its usefulness. Professor Hare has been employing it for six years past. He gives it in doses of 20 gr. in cachets, or dissolved in whisky or brandy, or in dry powder placed on the tongue and washed down with a little water or milk. As it is only slowly absorbed, it should be given an hour or two before the sweats usually come on. Dr. Stockman recommends doses of 30 gr. It is non-poisonous even in large doses, in this respect possessing an advantage over belladonna, picrotoxin, agaricin, &c., which are all powerful poisons. It produces no depression of the heart or nervous system.—*Practitioner*.

A HEADACHE-REMEDY.

ONE very common form of headache commences in this way: The patient sometimes feels a little unwonted irritability at night, but this irritability is not always present. It is very often the precursor of a headache. He awakes in the morning about 4, 5 or 6 with a feeling of weight in the head, but not a headache. He is very drowsy, disinclined to rise, and is apt to turn over and go to sleep again at once. If he does this he awakes again about 7 or 8 with a distinct but not a severe headache, usually frontal or temporal. As the day goes on the headache becomes worse and worse, until in the afternoon or evening it becomes almost unbearable. It then finishes up with sickness, after which the patient becomes easier, but feels much exhausted. A headache of this sort may frequently be prevented by the patient taking a mixture of bromide of potassium and salicylate of sodium over night, or by getting up and taking it when he awakes with a heaviness in the early morning, instead of turning over and going to sleep again.—*Dr. Lauder Brunton*.

CANCER-PAIN.

DR. LLOYD ROBERTS, of Manchester, recommends phenacetin instead of opium for the relief of pain in cancer of the uterus, rectum, and mammary gland. It does not produce gastric disturbance or constipation. In severe cases the amount required is 30 gr. in twenty-four hours, given dry and washed down with a little cold water.

A NEW COUGH-REMEDY.

DR. SCHRÖDER, of Hohenhonnef, has been trying peronin for the cough of phthisis. Peronin (manufactured by Merck) is a derivative of morphine by the substitution of the alcohol radical $C_6H_5CH_2$ for the hydroxyl group in morphine $C_17H_{19}NO_2(OH)$. It is given in doses of from $\frac{1}{4}$ to $\frac{1}{2}$ gr. dissolved in water, or as a pill. It has a position between morphine and codeine. It produces better and quieter sleep than the latter, and diminishes the intensity of the cough. The amount of the expectoration or the rate of respiration was never influenced. Two patients out of twelve complained of nausea, eructations, and burning in the region of the stomach next morning. The remedy has no bad effects on the intestines. My own experience, says Dr. Hector Mackenzie in the *Practitioner*, with the drug so far has been favourable.

FRIAR'S BALSAM REVIVED.

SOME old-fashioned remedies have more in them than modern practitioners know. Dr. James C. Potter, of Spennymoor, mentions in the *British Medical Journal* that he has given tr. benzoin. co. in the excessive diarrhoea of enteric fever with marked success. He says:—

I start by giving a dose of mʒ. of the tincture every two hours, and if the diarrhoea does not decrease in twelve hours I then double the dose. In all the cases after twenty-four hours' administration I have found marked benefit, the diarrhoea decreases, the stools are not so offensive, and the temperature is decidedly lowered, and the patient feels very much more comfortable. I attribute the success in these cases to:—(1) The internal antiseptic property of the drug; (2) the mixture forming a protective coat to the inflamed bowel; (3) the antipyretic action of the drug.

Perhaps homœopaths may say that it is the trace of aloes in the mixture that does the good.

EUCAINE AS A LOCAL ANÆSTHETIC.

DR. W. JOHNSON HORNE and Mr. Macleod Yearsley, F.R.C.S., write (*Brit. Med. Journal*) in favourable terms of the usefulness of eucaine as a local anæsthetic in the surgery of the throat, nose, and ear, although they are not prepared to say that it is superior to cocaine, adding, however, "Were eucaine to be of no further service than to act as an efficient substitute in cases in which an idiosyncrasy for cocaine precluded an operation, even then this new local anæsthetic could not be regarded otherwise than of importance. So far we have not met with a case in which a single symptom supervened in the least way suggestive of a toxic effect of the drug." They recommend the solution to be prepared as wanted by dissolving one (for 5 per cent.) or two (for 10 per cent.) 5-gr. eucaine-hydrochloride solids in 110 minims of water.

ARTICULAR RHEUMATISM.

METHYL SALICYLATE has long been used in the treatment of articular rheumatism, generally by internal administration. Siredey now recommends it as a local application (*B. M. J. Epit.* 79). The synthetic salicylate must be used: that he insists upon. The method of application is as follows. The part, having been washed, is laid upon a sheet of guttapercha tissue. The salicylate is then applied directly to the skin of the joint, drop by drop, and the guttapercha tissue is immediately brought over so as to completely envelop the affected part. A flannel bandage is then applied in the ordinary way. A thin layer of cotton wool may be used in some cases if the patient does not find it disagreeable or hot. The dressing is renewed every twenty-four hours. [The objection to this method is that the salicylate may become incorporated with the guttapercha, which is soluble in artificial as well as natural essential oils.—ED.]

Hop-substitutes.

AN apparently authoritative statement was published recently to the effect that quinine was being sold to brewers for use as a substitute for hops, and that when the Board of Inland Revenue were appealed to the answer given was that the transaction was not objectionable from their point of view, because hops are not exciseable. That, of course, does not prove that a beer made with quinine or other bitter than hops may be safely sold, for it is possible that the vendor might be convicted under the Sale of Food and Drugs Act, if a Court could be convinced that there was sufficient ground for holding that by beer or ale was generally understood a fermented liquor made from malt and flavoured with hops.

It would be of some interest to trace the gradual develop-



BUCKBEAN (*Menyanthes trifoliata*).

ment of a taste for bitter drinks. It is not a natural taste, and it did not exist some centuries ago. Early English ale contained no hops, and although they were apparently used earlier in Germany and the Netherlands, the first discoverable mention of them as an ingredient of beer in England is found in the middle of the fifteenth century. They were no doubt first used as a preservative of beer, and were looked upon for a long time as salicylic acid or other preservatives are now. Indeed, there is a household order of Henry VIII. forbidding the brewer to add any hops to the ale supplied to the palace, and much later the Common Council of the City of London petitioned Parliament against the use of hops, because they would "spoil the taste of the drink and endanger the people." What Parliament did was to tax the hops, and that apparently made them popular.

The writer who told about the brewer's purchase of quinine

also reported that in his younger days vinegar was sold to brewers to give their beer an "old" flavour. This may have been used occasionally, but it would not have been so effective as the well-known adulterants, sulphuric acid or alum, for that purpose. Grains of paradise were also at one time much in demand for imparting warmth and flavour, and cocculus indicus, nux vomica, and even opium, were, it used to be said, added to make the beer more intoxicating. Those stories were, however, perhaps exaggerated.

The agitation which resulted in the appointment of the Royal Commission which sat last Session to consider the alleged adulteration of beer has been proceeding for many years, and was no doubt largely encouraged by those inte-



EUPATORIUM VILLOSUM.

rested in the growth of and trade in hops. A deputation of hop growers and merchants waited upon the President of the Board of Trade twenty-two years ago on this subject, but nothing definite has resulted till this Commission was appointed. The inquiry will probably be resumed this year.

That there is some truth in what is alleged cannot be denied, but it is perhaps too fanciful a presumption that the cause which is too often associated with intoxication is directly traceable to the drugs, and would not exist if we had only our old pure malt and hops. The old enemy alcohol cannot be permitted to shift his responsibility so easily as that. It is curious how well the brewers seem to

keep the secrets of the flavouring-ingredients they use. The subject has been considered as of such importance that it has occupied the attention of some of the most eminent toxicologists. In 1874 Professor Dragendorff, of Dorpat, published in the *Archiv der Pharmacie* of Jena the results of his researches into the nature of the bitter substances used in the brewing of beer. Among the adulterants alleged to have been used may be named quassia-wood, cocculus indicus, wild rosemary, wormwood, water trefoil, blessed thistle, lesser centaury, gentian, white-willow bark, colocynth, meadow saffron, mezereon-bark, belladonna-leaves, henbane-leaves, nux vomica seeds, cascarilla-bark, grains of paradise, chiretta, chamomile-flowers, shrubby trefoil, and several species of *Eupatorium*.

To the orders known for their aromatic bitterness it is but natural that the attention of those on the look-out for hop-substitutes should be directed, consequently the *Simarubaceæ*, *Gentianeæ*, and *Compositæ* have been, perhaps, the most extensively drawn upon, the chief of which in the first-named order has been quassia. In the *Gentianeæ* there is a wider scope, for, besides the several species of *Gentiana*, *Sabbatia angularis* is said to have been used in America, while the centaury (*Erythraea Centaurium*) has been applied to the same purpose in England, as well as the buckbean, or marsh trefoil (*Menyanthes trifoliata*). This plant, which is frequently found in marshes and moist meadows, has a wide range outside our own country, extending into Arctic Europe, Siberia, North-Western India, and North America. It has no smell, but an intensely bitter taste which it imparts both to alcohol and water, either by infusion or maceration. Linneus tells us that in some parts of Lapland, where the buckbean is abundant, the roots are dug up and given to cattle, and in times of scarcity the dried and pulverised roots are mixed with a little wheaten flour and made into a kind of bread for human consumption. The peasantry also use the leaves, instead of hops, for preserving their beer, to which they give an agreeable flavour, as well as preserving it from acidity. At one time the leaves were recommended, and even used, in this country for a similar purpose, 2 oz. of the dried leaves being reckoned equal to a pound of hops. The leaves should be gathered in May and June, before the flowers are perfectly developed, and, being well dried, they may thus be preserved for use. Another well-known and allied plant which has been recommended as a hop-substitute is the chiretta (*Svertia Chirata*), a shrubby herbaceous plant of Northern India. The pure bitter character of this plant is well known, and it would carry with it no deleterious effects. Among the *Compositæ* are a large number of plants which, in addition to the bitterness which characterises them, have also a powerful aromatic property, sometimes of an intoxicating nature—as in the wormwood, which, as is well known, is one of the principal ingredients in the French liqueur absinthe. The composite plants, however, that have attracted most attention of late as substitutes for hops are the species of *Eupatorium*, and notably *E. villosum*. It is a West Indian species, growing to a height of from 6 to 7 feet. The leaves are rough and viscid, and are said to have a similar smell to those of *Cistus*. When a few years ago the leaves of this plant were recommended as a substitute for hops, they were to be met with as imports in compressed oblong cakes. There is no clear evidence of what became of them. The leaves and tops of the "Bitter Bush," an allied species, *Eupatorium nervosum*, a perennial herb of Jamaica and Haiti, are also well known to yield a very bitter infusion by steeping in water.

The shrubby trefoil (*Ptelea trifoliata*), a rutaceous shrub or small tree of North America, now frequently grown in

this country for its ornamental character, has rich green leaves, which in autumn assume a yellowish tint. The flowers are greenish, and are arranged in corymbs, producing quite late in autumn an abundance of curiously-winged fruits, not unlike in general appearance those of the elm. In Canada the young green fruits are used in infusion as an



SHRUBBY TREFOIL (*Ptelea trifoliata*).

anthelmintic. They have an intensely bitter aromatic taste, and on this account have been used in brewing. In drying and with age, they lose their bitterness.

Who is it dare not advertise
Nor peppermints for wind advise,
Lest Stamp Acts broken ope his eyes
And forty-shilling fines surprise?
The Chemist.

Who work for fourteen hours a day,
Prescriptions mix, and taxes pay,
And patent medicines give away
For less than cost? Who do you say?
"Most Chemists?"

J. A. C.

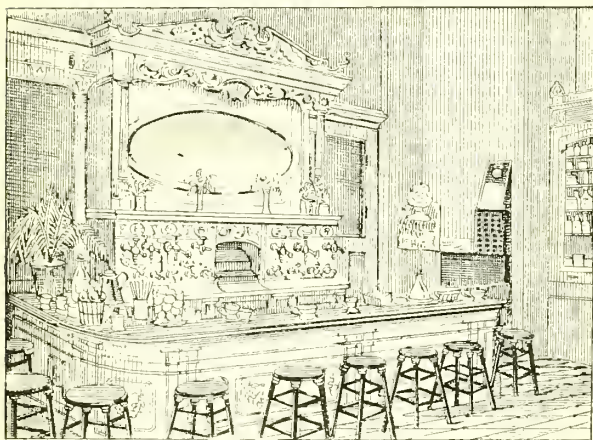
A Chemist's Trip to America.

I WAS one of the passengers who went over to New York from Southampton by the *St. Louis* at the end of last summer. Professor Remington was another, and we occasionally rubbed shoulders with Mr. George Gould, quite a quiet man, considering his enormous wealth. I will not inflict you much about the voyage; it was pleasant and uneventful, and, like everyone who goes across the Atlantic for the first time, I felt strangely agitated as we approached Sandy Hook, and steamed into the bay, past the Liberty statue, towards Manhattan Island. I slept in a sky-scraper that night—Manhattan Hotel, Fifth Avenue—a fine stone building of twenty-five storeys, with every luxury, furnished with numerous elevators and an outside iron staircase for use in case of fire—a very necessary convenience I considered it, looking down from my bedroom-window, eighteen storeys up.

The following morning I began to look around, and took in about a dozen pharmacies in my perambulations, some of them below, and others far beyond my expectations. The finest pharmacies are spacious shops, with large plate-glass windows, expensively fitted with electric light, and the inevitable soda-fountains, which are a feature of all

AMERICAN PHARMACIES.

Some of those I saw would cost from 5% to 2,000% being composed of marble onyx, and with silver fittings and statuary of the most sumptuous nature. My general impression was that the shops are larger, better lighted, and brighter altogether than home pharmacies. There is an



A SODA-FOUNTAIN.

entire absence of crowding things on the counters or in the windows. Regarding the latter, I may say that in most of those I saw, a display was made of not more than three or four different kinds of goods, and the e were in sufficient quantity and extremely attractive in their get-up to rivet the attention of the least interested passer-by.

CUTTING PRICES

are as much the rule in America as at home, and various means have been devised with a view to lessen—and, if possible, to curtail—the effects, but these are no more successful than home methods. American chemists are watching the efforts of the P.A.T.A. with keen interest, and seem to favour the plans adopted by that Association.

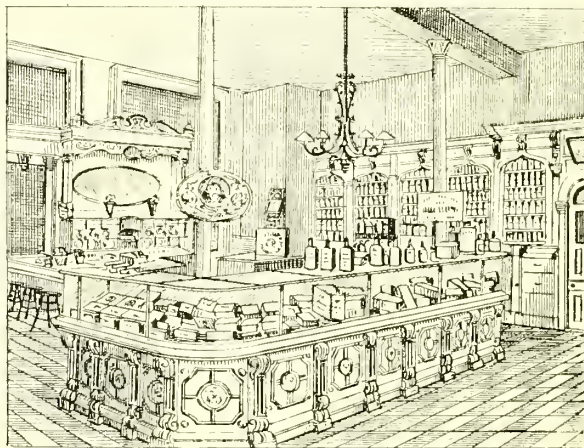
My next call was at Chicago, whither I went by the New York Central Railway by way of Hudson River to Buffalo, and thence by Michigan Central Railway. The 1,000 miles was covered in twenty-four hours. The railroad-cars are most comfortable, and the perfect baggage-system relieves one of the trouble occasioned at home in looking after it. What impresses one in Chicago is the great size of the city—one of its streets is more than a dozen miles long in a straight line—and the “sky-scrapers.” The pharmacies I saw did not come up to those in New York; they were large, but

had a dingy look, and were not attractive, and the wire-gauze swinging doors, which are necessary to keep out the flies in summer, make them look worse than otherwise they would do. No visit to Chicago is complete without a call at the stockyards and Armour & Co.'s great pork establishment. I went one morning, and was not disappointed. No visitor is ever likely to forget the sight. The slaughter of thousands of pigs and cattle, without cessation all day long, and in full view of the visitors, for whom corps of guides are provided, is not a thing which one can easily forget, hard though he may try.

On the return journey I stayed some time in Detroit, a charming city of 300,000 inhabitants, with wide streets lined on both sides with fine trees and bordered with strips of green lawn. Here I had a better opportunity than in any other place during my trip of inspecting the pharmacies, and I have selected Stevens & Todd's store, on Woodward Avenue, as typical of the best class of

MODERN AMERICAN DRUG-STORES.

On entering the store its spaciousness and its costly fittings at once attracted my attention. The fittings are of polished mahogany brightened with plate-glass mirrors, filled with rows of handsome cut-stoppered and glass-labelled bottles, and in front some of the finest counters, with carved fronts, I have ever seen. The top of each counter was a plate-glass case filled with fancy cut bottles, brushes, &c., most attractively laid out and in perfect taste. Towards the entrance was the soda-fountain, built of choice marble and with silver mounts, costing nearly 1,000£, while in front of a Silesian marble-topped counter was a row of can-bottomed stools occupied by many customers, all busy partaking of the various refreshing decoctions which a smart assistant deftly prepared for them. The illustration already printed gives a good idea of the soda-fountain—the feature above all others which distinguishes American from European pharmacies. One cannot go into a drug-store on a hot summer's day without thinking of the rich returns that the owners have from the cooling drinks; and there are few drug-stores which do not have a soda-fountain. These are the old-fashioned pharmacies, or those of new-fashioned clever young men who abhor everything except pure pharmacy. They also abhor the cigar-counter, which is another distinguishing feature of the American drug-store. The second sketch shows the cigar-stand in Stevens & Todd's



THE CIGAR-COUNTER.

store. You can get any “smoke” you like, and you can light it and go. Profitable extras are a feature of these go-ahead drug-stores; you can get bon-bons, chocolates, a button-hole bouquet—indeed, many a thing which catches the eye; and, as a rule, the prices are good, and the profits in sympathy therewith.

A visit by a chemist to Detroit without a call at

PARRE, DAVIS & Co.'S FACTORIES

I take to be an inconceivable thing, judging from the friendliness of the reception which I had. I was shown over the whole establishment. The main buildings are arranged in the form of a hollow square, the principal front being

towards the Detroit River, which separates the United States from Canada. The capsule-manufactory, crude-drug department, glass and packing department, buildings for storage of explosive materials, and the large physiological buildings, stables, &c., are grouped round the main laboratory.

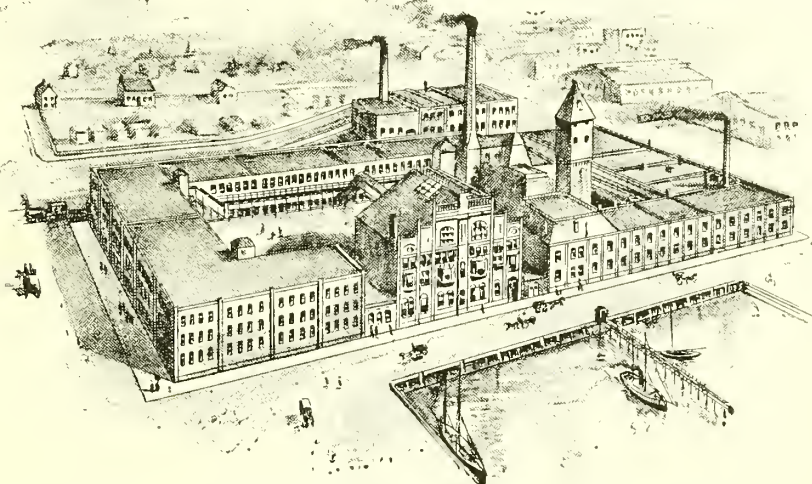
I was conducted through the stables and pens by Dr. Houghton, one of the biological and physiological staff, and was shown sixty horses, who supply 25,000 doses of anti-diphtheritic serum per month. One is surprised to find the animals in such a first-rate condition. The whole system of preparation was shown me in detail, and a very interesting process it is.

The barking of dogs and cock-crowing attracted my attention to the other animals, which include guinea-pigs, frogs, two donkeys, and some sheep—all the animals being used in the testing of such drugs as ergot, digitalis, belladonna, strophanthus, Indian hemp (which cannot be chemically standardised with accuracy), and the various serums. I believe no other firm uses this method of ensuring the therapeutic value of preparations. That there is great necessity for such tests anyone who is acquainted with

them. Here all products are tested, as well as the crude drug. Every possible care is taken that nothing ever enters into stock that has not first been thoroughly tested as to quality and strength.

Connected with the establishment are a thoroughly efficient fire-brigade, a library and reading-room, a splendid herbarium and library of works on chemistry, botany, physics, and therapeutics. There are over 1,000 employes in the Detroit laboratories, and the firm employ 126 travellers. One feature should not be forgotten—that is the excellent and almost perfect system of checking adopted to prevent mistakes. I made the remark that surely it was overdone, but the reply came that among so many employes there was certain to be someone who would be less careful than others, and it was the possibility of error arising therefrom that necessitated the extra precautions used. I came away delighted and instructed with what I had seen.

Leaving Detroit I made for Niagara, spent a day beside the Falls, then travelled by the high valley route to Washington. The autumn tints on the foliage, which are so magnificent in the United States, were a revelation to me. After doing Washington, and taking in the new Congress Library (cost



PARK, DAVIS & Co.'s HEADQUARTERS.

preparations' of ergot, strophanthus, and Indian hemp will readily admit. PLATE 1978

I next visited the main offices, and passed in succession the capsule and pill-coating, tablet-making, wet laboratory for liquid extracts, &c., finishing and shipping, and printing departments. I can only point out a few of the many interesting items that I saw. In the capsule department the firm were fitting up some new capsule-making machinery just arrived from Paris to enable them to keep in the first rank in this line of goods. There were 150 young women employed here filling capsules and gelatine-coating pills. The pills are kept in position by suction and dipped into the solution, thus obviating the hole left in pills coated by being stuck on needles. Each girl can coat a million pills per diem. In the tablet department about three dozen machines were at work, the older pattern making a great noise and throwing out 30,000 per day, while the new machine designed by the manager of the department turns out 180,000 per day. A machine for filling powders into empty gelatine capsules seemed to me the most wonderful device I had ever seen, and is a marvel of ingenuity. It takes the cap off the capsule, fills it with powder, and puts on the cap again, too quickly for the eye to follow the process.

In the extract department one expects to see the immense vats of liquid extract of cascara and other liquid extracts for which P., D. & Co. are famous. Here also podophyllin was being prepared in 1-cwt. lots. In another part two large stills, holding each 1 ton of sandalwood, were making sandal oil. Adjoining this I found a dozen sugar pill-coaters at work, all revolving by power got from an engine worked by electricity. I then passed several large vacuum-pans, evaporating-pans, &c. I was introduced to Dr. Frances and Professor Schwickerath, of the chemical and analytical laboratories, which are as complete as money can make

\$5,000,000), I visited Philadelphia, and, once more, New York, to find the *Campania* waiting for me.

Cinnamomum Species in N.S.W.

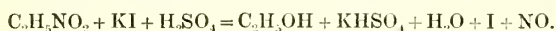
AN interesting paper was read before the Linnean Society of New South Wales a few months ago, and it has recently been issued as a separate reprint by Mr. R. T. Baker, F.L.S., Assistant Curator of the Sydney Technological Museum. Two species of *Cinnamomum* have been identified, one of them a tree running up to 120 feet high, with a girth of 2½ feet; the other a tree about 90 feet high, up to 2 feet in diameter. The first (*C. Oliveri*) is known as black, brown, or white sassafras, and has been previously described in Queensland, where Mr. K. T. Staiger examined the bark and distilled some of the oil, which he finds to be so nearly the specific gravity of water as to be difficult to separate. When filtered the oil is of a clear light-golden colour, with a tinge of green, and possesses a delicious odour. Chemically it cannot be classed with the cinnamon oil of commerce, nor with cassia oil, as it is deficient in cinnamic aldehyde, although the principal constituents of these oils (cinnamic aldehyde and eugenol) were present. Mr. Baker is of opinion that the profitable distillation of the oil is practicable, as it is only a little more difficult to obtain than eucalyptus oil. The name proposed is Oliverian oil, the tree being named after Professor Oliveri.

The second species of *Cinnamomum* is a hitherto undescribed species, known by the bushmen as wild camphor laurel, or, on account of the high polish of the leaves and fruit, copal tree. The bark is thin, non-aromatic, and a distillation of 60 lbs. gave very little oil. This is named *Cinnamomum cirens*.

"Sweet Nitre."

NOTES ON THE MANUFACTURE AND TESTING OF NITROUS-ETHER PREPARATIONS.

NO pharmacopœial preparation has given rise to so much litigation as spirit of nitrous ether, and few have undergone so many changes as that spirit. In the days before the British Pharmacopœia the Dublin, Edinburgh, and London colleges were agreed upon nothing about the spirit, except in comparative ignorance of its constitution and strength. The 1864 B.P. endeavoured to reduce everything to uniformity by giving a process for making the spirit by acting upon sodium nitrite with sulphuric acid in presence of rectified spirit. It failed, because the sodium nitrite then obtainable rarely contained more than 10 per cent. of NaNO_2 , and heat was used. Still the product was decidedly better than the P.L. spirit; but the liking for the latter was so strong that the trade would have none of the new stuff, so the late Professor Redwood devised the process which is still official, and is likely to remain so. This process is very simple. The apparatus intended by the Pharmacopœia is shown in fig. 82, page 476, *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1898. Instead of a direct flame a sand-bath is used to heat the flask, and a thermometer takes the place of the stopper, the bulb of it being wholly immersed in the liquid. The distillate is a mixture of ethyl nitrite, ethyl acetate, aldehyde, paraldehyde (probably), ethyl alcohol, and probably other bodies. Ethyl nitrite, the active principle, is an exceedingly volatile and easily hydrolysed ester. Therefore it is an improvement upon the B.P. process to collect the distillate in a portion of the spirit required to dilute it; 20 oz. may be taken and placed in a bottle marked at 32 oz. and 34 oz.; when the distillate reaches the first mark the end of the first stage is indicated, and so on. Care should be taken to convey a tube from the end of the condenser to the bottom of the receiver, but if there be any tendency to cooling in the contents of the retort the liquid in the bottle may run back, so that the operation should be closely watched throughout. If, on the other hand, bubbles rise through the spirit in the receiver, another bottle containing spirit should be connected with it by means of suitable tubing. Two double-necked Wolff's bottles do very well for receivers. When distillation is finished, place a hydrometer in the spirituous liquid, and dilute it with spirit until it is of the required density—0.843 is the average—and test the spirit by the potassium iodide process. If on diluting the distillate to, say, 52 oz. it is found on assaying it that 5 c.c. yield 40 c.c. of gas, more spirit has to be added to bring it to the required strength—35 c.c. of gas from 5 c.c. of spirit. The quantity required is found by multiplying the actual volume of the spirit by the difference in 35ths between the volume of gas obtained and the normal. In this case it is $\frac{3}{35}$, so that the amount of spirit which must be added is about $4\frac{1}{3}$ oz. ($52 \times \frac{3}{35} = 4.45$). The spirit contains about 3 per cent. of ethyl nitrite (nitrous ether). The method of determining this depends upon the simple reaction by which the spirit decomposes solutions of potassium iodide. The reaction is as follows:—



If this reaction is allowed to take place in the open air the NO becomes NO_2 , and immediately decomposes more iodide. About fourteen years ago two Scotch chemists were working away with the reaction trying to get rid of the air's influence, and thus to make the amount of iodine freed a measure of the ethyl nitrite, when Mr. A. H. Allen stepped in, said a better way was to conduct the reaction in a closed vessel free from air, and measure the gas evolved (NO) as Eykman had previously done with ferrous sulphate and sulphuric acid as his reagents. This settled the matter for ever, and Allen's nitrometer is now used for the assay. It is represented in fig. 1. To make an assay open the tap and pour saturated solution of common salt into the reservoir tube A until the solution rises exactly to the tap above, B; then close the tap, raise the graduated tube, and lower the reservoir-tube so that the liquid in it is on a level with the tap, or a little below it. Next pour 5 c.c. of the spirit into C. Open the tap cautiously, so as to allow all the sample to pass in without allowing any air to enter. Five cubic centimetres of

a strong solution of potassium iodide is next allowed to enter the tube, and lastly 5 c.c. of dilute sulphuric acid, the operator taking care that no air is allowed to enter. The way to ensure this is to put a little more than 5 c.c. of iodide solution and a little more than 5 c.c. of acid into the cup, and do not run the whole in. As the gas is evolved it forces the salt solution back through A, so that it is always advisable not to have A more than a third full. A slight circular movement of the apparatus suffices to mix the spirit, acid, and iodide when the first flow of gas stops. In ten minutes or so the volume of gas may be read off, bringing the liquid in A and B level. The B.P. requires a spirit to yield between five and seven times its volume of the gas—i.e., 25 c.c. to 35 c.c. from 5 c.c. of spirit. ether. nit. If a nitrometer is not available the following extemporised apparatus suits as well. Take an ordinary burette and determine the volume of the part between zero and the stop-cock. Fill the burette with brine, put the thumb on the top to exclude air, and invert into a basin or measure containing brine. Now attach a small funnel to the outlet-tube by means of a piece of indiarubber tubing. Run in spirit, iodide, and acid as in the preceding experiment. The pressure in this case makes the reading of the gas between $\frac{1}{10}$ and $\frac{1}{20}$ less than it should be.

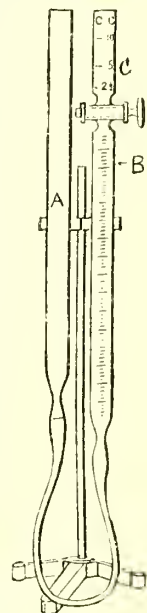


FIG. 1.

Sweet spirit of nitre is spiritus aetheris nitrici P.L., sp. gr. 0.850, made by the action of sulphuric and nitric acids upon rectified spirit. It rarely contains flavour and action than the B.P. spirit. It has been said that the more than 1 per cent. of ethyl nitrite, and is milder in public want this spirit when they ask for "sweet nitre," and magistrates in this country have sustained that view when cases under the Sale of Food and Drugs Act have come before them for decision. It undoubtedly differs in flavour, and seems to have a certain and mild action as a diuretic. It should yield not less than twice its volume of nitric oxide by the nitrometer.

Attempts have been made to introduce pure ethyl nitrite into medicine, but they have had little success. This nitrite (hyponitrous ether) is made as follows:—Dissolve 36 grammes of sodium nitrite in sufficient water to make 120 c.c. of solution; place the long narrow vessel containing this in a freezing-mixture of ice and salt. Separately mix sulphuric acid 13.5 c.c., rectified spirit 32 c.c., and water to 120 c.c. Cool this also. When cooled to 0° C. pour the acid mixture through a thistle funnel to the bottom of the nitrite solution, stirring all the time. Ethyl nitrite is immediately formed, and is decanted, washed with water in a separator (fig. 2), the water drawn off, the nitrite shaken with anhydrous potassium carbonate, and after a few minutes decanted therefrom. A 3-per-cent. solution of this in absolute alcohol with 5 per cent. of glycerine added has been used to a slight extent in place of the more empiric spt. ether. nit. It has not the same flavour as spt. ether. nit., the aldehyde, paraldehyde, &c., being absent.

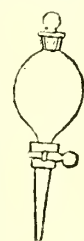


FIG. 2.

REFINED POSTAGE-STAMPS.—"Have you any postage-stamps?" she said to the chemist. "Yes, miss. Twopenny stamps?" "Yes." "How many, please?" "Five." "What flavour?" "Flavour! What do you mean?" "Well, we have them with the mucilage in different flavours—peppermint, wintergreen, vanilla, strawberry, and lemon. Some people like one kind and some another, but as nearly everyone objects to the flavour of mucilage, we flavour our stamps to suit our customers. Of course, we make a charge for our work, but find a growing demand for flavoured stamps." "How do you sell them?" "Twopenny stamps, threepence each." She expressed her great satisfaction with the improvement, and said she would take six stamps—strawberry flavour.

Practical Notes and Formulæ.

WITCH MOUTH-WASH.

	Oz
Distilled witch-hazel ...	18
Honey of roses ...	4
Tr. of myrrh ...	4
Tr. of cinchona ...	4
Glycerine of borax ...	2

Mix and filter.

One part of this solution to four parts of water for rinsing the mouth. For sore mouth, irritable or sore gums.

WITCH COMPLEXION-BEAUTIFIER.

	Oz
Distilled witch-hazel ...	12
St. Thomas bay-rum ...	8
Depurated cucumber-juice... ..	4
Glycerine of borax ...	3
Water of ammonia ...	3
Tr. of benzoin ...	2

Mix and filter.

Apply several times a day to the complexion with a soft sponge.

—G. H. DUBELLE in *Practical Druggist*.

COMPOUND SYRUP OF SQUILL.

THIS is a favourite American cough-syrup, which is expeditiously made, according to Mr. J. K. Williams, by macerating 10 oz. each of squill and senega in a mixture of stronger ammonia (3 dr.), S.V.R. (3 oz.), water (40 oz.). After three days press and strain; return the marc, and remacerate with stronger ammonia (1 dr.), S.V.R. (8 oz.), water (40 oz.). Press and strain, mix the decantates, and shake with 2 oz. of precipitated chalk, filter, percolate through 100 oz. of sugar to make 168 oz.; then add tartar emetic (2 dr.) dissolved in 1 oz. of boiling water.

PAPER HYGROMETER AND BAROMETER.

DISSOLVE 10 parts of cobalt chloride, 5 parts of sodium chloride, 2 parts of calcium chloride, and $2\frac{1}{2}$ parts of gum arabic in 30 parts of water. Soak strong white bibulous paper in the solution and dry. A strip of this paper when exposed to the air changes with the weather as follows:—

Rose-red ...	Rainy weather	} Changeable.
Pale-blue ...	Very damp weather...	
Bluish-red ...	Damp weather ...	} Fine.
Lavender-blue ...	Almost dry weather...	
Violet ...	Dry weather ...	
Blue ...	Very dry weather	

Perhaps some chemists and druggists may be able to make a profitable extra out of the idea (which, by the way, is old), working the small print into their envelopes for the paper.

THE PERFECT MOUTH-WASH.

A THOROUGHLY antiseptic mouth-wash is almost impossible for several reasons, which a writer in the *American Journal of Dental Science* puts thus:—(1) Owing to dilution with saliva, any drugs sufficiently powerful to destroy germs are rendered almost, if not entirely, inert; (2) the short time of exposure while rinsing the mouth is insufficient for antiseptics of slow action, especially when particles of solid food are impacted in the teeth; (3) danger of injurious effects on the tooth-structure; (4) unpleasant tastes are objectionable. Soap, applied with a brush, is one of the best cleaners, because its alkali dissolves the mucous. The following is a good preparation:—

Listerine ...	...	...	...	...	3iij.
Glycerine ...	...	...	...	...	3iij.
Carbolic acid...	...	...	...	...	3ij.

Mix.

Dilute one-half teaspoonful in one-third glass of water. Hold in the mouth and continue the cleansing process carefully by the watch for at least two minutes.

This is effective, agreeable to most persons, and valuable by reason of its simplicity, as patients can safely vary the strength in using it from time to time, as the condition may seem to require.

A NEW INK.

Tannic acid ...	...	...	...	...	3j.
Pyrogallie acid ...	...	...	...	...	3ss.
Lactate of iron ...	...	...	...	...	3j.
Sulphate of iron ...	...	...	...	...	3j.
Pyoktannin ...	...	...	...	...	3ss.
Tartaric acid ...	...	...	...	...	3j.
Warm water ...	...	...	...	...	Ovj.

Shake well to dissolve. Set aside for a few days, shaking occasionally. Strain through cotton-wool, and add $1\frac{1}{2}$ oz. of fresh mucilage.

This ink writes a deep black, and gives good copies, it is said.

POUDRE ORIENTALE.

Blanched sweet almonds ...	...	...	...	lb. ij.
Rice-flour ...	...	...	...	3iv.
Powdered orris ...	...	...	...	3iv.
Powdered Siam benzoin ...	...	...	...	3iv.
Spermaceeti ...	...	...	...	3iij.
Tartrate of potash ...	...	...	...	3iij.
Oil of lavender ...	...	...	...	℥xxx.
Oil of rhodium ...	...	...	...	℥xxx.
Oil of cloves ...	...	...	...	℥xxx.

Crush the almonds and reduce to a fine powder along with the other solids, and mix with the oils.

WITCH-JELLY.

	Oz.
Distilled witch-hazel ...	16
Glycerine of borax ...	8
French rose-water ...	4
Orange-flower water ...	$3\frac{1}{2}$
Finest gelatine ...	$\frac{1}{2}$

Make into a jelly. This preparation to be put up in flexible metallic tubes.

WITCH FRECKLE-LOTION.

	Oz.
Distilled witch-hazel ...	16
Eau de Cologne ...	8
Glycerine ...	$3\frac{1}{2}$
French rose-water ...	3
Chloride of ammonium ...	1
Corrosive sublimate...	$\frac{1}{4}$

Mix and filter.

To be applied night and morning, with a soft sponge, allowing it to dry on the skin.

HEADACHE-POWDER.

ASKED for a powder that will invariably bring back the customer, recommend itself, and make business brisk, Mr. A. E. Ebert suggests the following in *Meyer Brothers' Druggist*:—

Cerium oxalate ...	...	...	1 av. oz.
Sodium bicarbonate ...	...	...	1 av. oz.
Magnesium carbonate...	...	...	120 gr.
Liquorice-root, powdered	...	...	120 gr.
Acetanilide ...	...	...	4 av. oz.
Oil of coriander...	...	...	5 drops
Oil of nutmeg ...	...	...	3 drops

Mix.

Reduce to very fine powder, divide into 10-gr. powders, wafers, or capsules, or make into tablets or pills of 5 gr. each. One powder [wafer, &c., or two tablets or pills] to be taken with water. Repeat the dose in fifteen minutes, if necessary.

AROMATIC WATERS.

THE following is a rather clever way of making aromatic waters (*e.g.*, aq. menth. pip., aq. anethi, &c.) extemporaneously. It is suggested and has been proved by Mr. J. K. Williams, Hartford, Conn.:—Mix equal volumes of oil, S.V.R., and glycerine. Fold two filters together, open out, and with a filass rod (used in mixing the oil in the measure) spread the mixture over the surface of the inner filter. Place the filters in an earthenware funnel, and pour on the full quantity of water at near the boiling-point. Catch the first filtrate in the measure in which is the glass rod, and return to the filter. Repeat this two or three times. In making camphor-water dissolve the camphor in its own weight of S.V.R. in a small mortar, then add the glycerine, and proceed as with the oils.

Great Meeting of Chemists at Slocum.

WE are charged with having lately reported the Cash Chemists' Association too liberally, and we have been requested, in consequence, to present an equally fair account of the opposition proceedings at Slocum. Anxious to give a fair hearing to advocates from all points of view, we, in accordance with the invitation of the Secretary of the Slocum Chemists' Association, despatched a special reporter to attend the meeting convened by that Association to consider the conduct of Mr. Scotchem in underselling his brother chemists, and in bringing out a "cutting" price-list. In the notice of the meeting it was announced that Mr. Tromm-Bone, of the Indigent Traders' Protection Association, would be present and address the meeting.

On the evening in question, the meeting began to assemble in a private room at the Blue Lion, and the attendance ultimately numbered seven. At 8.30 Mr. Pompos (the President) took the chair. He was glad, he said, to see such a



MR. POMPOS, THE CHAIRMAN.

representative gathering of the Slocum chemists. Never in the history of their Association had such an assembly come together. Perhaps the presence of Mr. Tromm-Bone—(loud applause, during which George, the waiter, looked in to see if anything was required)—had something to do with it; but there was another matter which they had very much at heart, or—might he say?—at pocket. He referred to the utterly immoral practice of what was commonly called "cutting," which, to their profound sorrow, had been initiated in their town by Mr. Scotchem. He was glad to see there that evening his friend Mr. Scotchem. (Cries of "Oh!") Yes, continued Mr. Pompos (with a smile of ineffable magnanimity), his dear friend Mr. Scotchem. Some of them had stigmatised Mr. S's conduct as culpably dishonourable—(shuffling of feet and murmurs)—but he preferred to think it arose from inexperience; and he took his presence there that evening to be a sign of repentance for his past conduct. (Hear, hear.)

They would, no doubt, expect him, as their President, and as the only pharmaceutical chemist in the town, to give his views upon "cutting." Of course, he admitted that even a pharmaceutical chemist was but human, and a great poet had said, "To err is human." If he erred, that must be his excuse. In their work as members of the most noble calling upon earth they had to handle so-called patent medicines, and he must add that hitherto they had done so with considerable pecuniary advantage. Possibly these medicines were not always what they pretended to be; but that, of course, was not their fault. If the public wanted them, well, they must supply them; and there was no denying they had yielded a fair profit. But, by the action of one individual in their midst, that happy state of affairs had passed away, and

they were now losing on the sale of proprietary articles. (Cries of "Shame!") Yes, but they had discovered what worthless and pernicious things those medicine were. The scales had fallen from their eyes, and they now knew that while Bunion's Bunkum at 33 per cent. profit might benefit their customers, yet that remedied at 5 per cent. profit was useless and even harmful. His motto had always been "*Pro bono publico*," and, for their own good, he had always bled the public to the full measure of their capacity. If sometimes he overestimated that capacity, he had erred on the right side, and it was an error in which he had been generously seconded by his brother chemists.

It may have been that the eccentricities of Mr. Scotchem (a mere tyro) in the opposite direction were those of youthful exuberance and indiscretion. He fervently hoped that Mr. S. had now sown his "wild oats," and that never more would he degrade their honourable profession by selling a 6-oz. mixture for less than 1s. 6d.

In the end the public gained by the conservation of high prices. (Applause.) If they (the public) paid a heavy fee for having a prescription dispensed, they thought more of it and it did them more good. If they paid full price for patent medicines, they bought less of them, and, consequently, did themselves less harm. Mr. S., in his price-list, had proclaimed himself the champion of the public; but if he had the public welfare really at heart, he ought not to "cut." He appealed to his sense of honour, to his sense of humanity, and besought him, on behalf of the British nation, to raise his prices. (Tremendous applause.) Here the speaker's feelings overpowered him; he cleared his throat, and blew his nose, but was unable to proceed. Visibly overcome, he signed to Mr. Tromm-Bone to address the meeting.

Mr. Tromm-Bone said, as a retailer, he fully appreciated what their worthy Chairman had told them in his magnificent opening address. He had listened to great orators, and had often spoken himself, but had never heard anything finer than Mr. Pompos's peroration on behalf of the British public. He must, however, add that he could also, in some degree, sympathise with Mr. Scotchem. While he abhorred with his whole soul the pioneer "cutter," he could not feel unkindly towards the man who "cut" in self-defence.

He was there to plead the cause of the only organised attempt that had yet been made to stop this awful practice of "cutting." And who were the cutters? They were the vampires who, with the help of proprietors, were fattening on—whom? On the public? No—on their brother traders! (Frantic applause.) Were they going to stand still, like automatons, while their enemies threw brickbats at them? No! a thousand times, No!! (Cheers.) They were going to fight—(more cheers)—and they were going to win. (Tumultuous applause.)

But the fight could not be carried on without the sinews of war, and he called upon every man present to give liberally of that which he had, and let them remember that he gave twice who gave quickly.

At this point one of the audience was observed to be quietly stealing towards the door. The Chairman called him back, but he explained that he was only going to the hotel-bar to get change for a sovereign.

The Chairman, asked Mr. Scotchem if he wished to say anything.

Mr. Scotchem, on rising, was received with that respectful attention which greets a Chancellor of the Exchequer on a Budget night. He said that some months ago, having a newly-established business, and not making much headway, he determined to revise his prices and bring out a price-list. He felt sure they would all be extremely pleased to hear that since doing so his business had gone up by leaps and bounds. He was certain that the step he had taken was the right one. He had, however, no objection to support the Indigent Traders' Protection Association, and was prepared to conform to their rules, provided his fellow tradesmen did the same.

Mr. Tromm-Bone was about to start, "For he's a jolly good fellow," but recovered himself in time.

The Chairman, looking very ill, proposed a vote of thanks to Mr. Tromm-Bone, and

Mr. Snodgrass, the Secretary, in seconding this, said he thought they overlooked the importance of inculcating the principles enunciated by their President into the rising pharmaceutical generation. If this were done, fewer assistants would go over to those dens of iniquity—the stores.

A part-time assistant of his had just left him, and taken a berth with a limited company. He could not imagine what had induced him to do such a thing, because he had treated him as a father would; and he might also say that Mrs. Snodgrass had watched over that assistant as tenderly as a cat watches a mouse. To keep him from temptation's way, he had given him a very small salary; and so that his mind might be active for his studies, he had fed him on a spare diet; and that he might learn the humility essential to all seekers after knowledge, he had made him clean his own boots. And now he had bitten the hand that fed him, and had gone over to the "cutters."

The vote having been carried, the Chairman was about to



"WHAT ABOUT THE SUBSCRIPTIONS?"

declare the meeting closed, when Mr. Tromm-Bone, hurriedly rising, asked, "What about the subscriptions, Mr. Chairman?" Three members then made a sudden dash for the door. The President replied that, owing to family trouble and the engineers' strike, he was unable, at that time, to become a member of Mr. T.-B.'s Association. Mr. T.-B. replied that his Association had met such cases in this way. If a chemist was too poor to pay the annual subscription in one lump sum, he would be allowed to do so on the instalment principle—6d. a month—and he thought they could all afford that.

At this point, Mr. Scotchman came forward, remarking that it gave him great pleasure to give a donation of a guinea to the Indigent Traders' Protection Association. (Loud applause, during which the meeting dispersed.)

The Tale of the Tea Tabloid.

This is the tale of the Tea Tabloid,
The tale as he told it me,
'Mid the twilight gloom of the sundries room,
In our model pharmacy.

"O, list, kind sir, while of doleful fate
And of humbled pride I tell,
That those of my race who flourish still,
In lands where I love to dwell;
In Hindustan and the Flowery Clime,
And the far land of Cathay—
May know the doom that is waiting here
For the *Ternstromiaceæ* —
Proud *Ternstromiaceæ*.

We flaunt our pride and the Gods deride,
For we reckon not the price to pay."

The Tabloid wept in the darkening gloom,
As he thought of the price to pay.

"They caught us up in the flush of youth,
And bore us o'er the main;
And we swooped sad tales with the Camphor crude,
And wished we were home again;



But they let us pine, 'twas our fragrance fine
That tempted these men astray,
And they put us under a big machine
And thumped, and thumped all day;
They thumped the livelong day,
'Tis with shame confessed they our bulk compressed,
Then spread us out on a tray!"

The Tabloid sobbed in the sundries room
As he thought of that plebeian tray.



"At length in tiny tablets thus,
We are packed in our golden cell,
And sent broadcast with herald blast
To ring the Teaman's knell.
But the crowning point of our prideful pain
Is reached when the stores begin
To cut us down to fivepence net,
With a cake of soap thrown in,
A paltry cake thrown in!
Camellia's pride, known far and wide,
Is crushed in this land of sin."

And this is the tale of the Tea Tabloid,
The tale as he told it me;



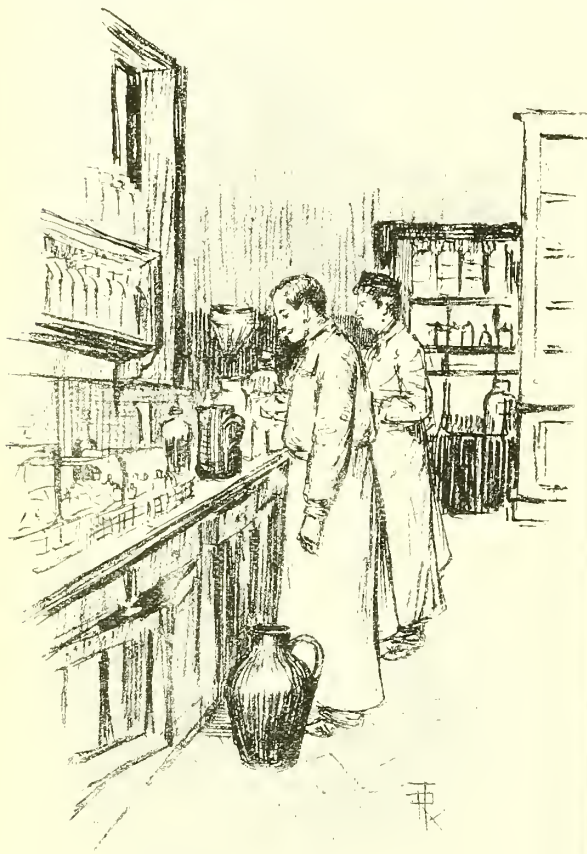
So I dropped a tear and the Tabloid in
To the water boiled in the vaseline tin,
And made me a cup of tea.

W. C.

VEGETABLE IVORY when touched with strong sulphuric acid is said to give a pink discoloration, whilst animal ivory would remain unchanged.

The Hospital Pharmacia.

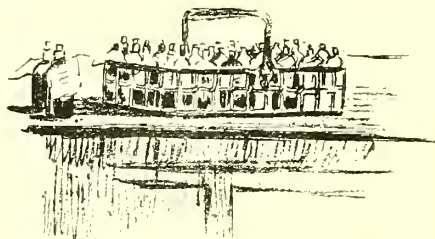
"If you care to see us at work," said my friend the *interne*, "call on me to-morrow morning at 8.30." The address he gave me was in the rue de Babylone, and I found it to be one of the small hotels which are so numerous in the Quartier Latin. "They don't lodge us at the hospital," he explained. "I get 50f. (2*l.*) a month lodging-allowance instead, and this room only costs me 35f. a month. But I must be at the hospital between 9 and 9.30 to relieve my colleague who is on duty." "But you are on duty every day." "What we call on duty is when we pass the whole twenty-four hours at the hospital. There are five of us at Laënnec, so each does this once in five days; my turn is to-day." Then we set out, and passing the Bon Marché we turned into the old building in question, which, like some other Paris hospitals, was once a convent. My companion disappeared and returned in working dress—black-cloth cap, white blouse and apron—and we entered the pharmacy, where he was greeted by four other intelligent-looking young fellows in similar attire.



THE "INTERNES" AT WORK.

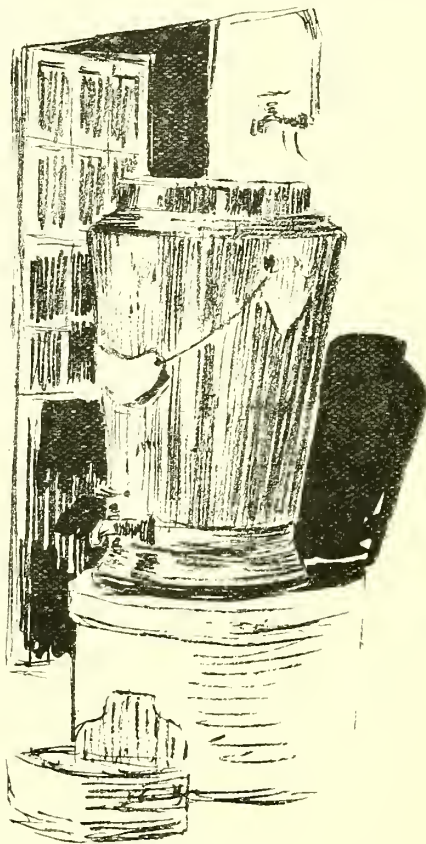
"Ah! there is Dr. X's bell," said he, as the gate-bell rang. He explained that the porter gives a different peal to announce the arrival of each doctor. "I must now go round his wards with him, and enter up my book." He showed me a volume of foolscap size, in which were inscribed the names of the various wards and the numbers of the beds, with corresponding columns for the medicaments, lotions, &c.; and explained that his duty was to note any changes of medicine that the doctor might prescribe, in this volume, the house-surgeon on duty having a corresponding book in which to enter up the diet and medical treatment generally. Half a dozen *externes* (medical students) also followed round the wards.

We first visited the women's wards, the old women or "chronic" cases upstairs, the temporary or "acute" cases downstairs, and the women with babies in cheerful little wards by themselves. I noticed that the disinfectants,



THE MEDICINE-BASKET.

largely in evidence, were all artificially coloured to prevent any possible mistake. Carbolic acid is always tinted red, corrosive sublimate and boric water white. There was not much to note, after all, and at 11 o'clock the dispensing began. Two or three *internes* had not been round the wards at all, and had got well forward with their work. "As a matter of fact," I was told, "we know pretty well what will be wanted, and can get most of it ready in advance. For instance, the doctor to whose 'service' I am attached is great on this 'calming-syrup,' so I keep a number of bottles ready. Then I know in half-a-dozen other cases that the medicine will not be altered for a fortnight, and so on." In the pharmacy each *interne* has his little case, and a tray or basket containing forty bottles (the wards each contain about this number of patients). All the bottles (there are three sizes—viz., 50, 125, and 250 c.c.) are made to fit



COPPER "TISANE" POT.

into this tray, and each bears a label—white for internal medicines, red for lotions and external medicaments. If the "external" remedy is really dangerous, the red label is gummed on to the bottle instead of merely slipped round the

neck. Adjoining the pharmacy is a roomy hall used for storage and rough work. Large copper pots are also there for boiling the popular "tisanes." Disinfectants are carried to the wards in immense brown earthenware pitchers, but once there they are emptied into glass receptacles so that the colour may be clearly seen.

The morning's dispensing finished, the *internes* adjourned to *déjeuner*.

"Here is my home for the next twenty-four hours," said my companion, as he conducted me to a small building, which he informed me was exclusively devoted to the pharmacists' *internes*. The medical house-surgeons are lodged elsewhere. I did not pity him much. Upstairs there was a comfortable bedroom, and a study adorned with a couple of skulls and cross-bones over the mantelpiece, with a nice little library of scientific works which an annual Government grant enables the staff to keep up to date. Lunch was served in the cheerful downstairs room, the walls of which were enlivened by some clever sketches, while a piano stood in the corner. The man "on duty" is boarded as well as lodged by the hospital, but the others have to cater for themselves. As a matter of fact, the whole of them club together and thus secure the advantage of co-operation. I learned that all except my friend would be free after lunch. These free afternoons, which give time for study, are the great attraction of the *internes*' life. The right of putting "ex-Interne



THE PITCHERS FOR DISINFECTANTS.

at a Paris Hospital" on the pharmacy window-panes when the men commence business on their own account is also much appreciated; but the pay is small. The first year it amounts to 24*l.* a year, and the possible maximum is 48*l.* This sum is only paid in the exceptional case of a man remaining five years in the service, and he must be a gold medallist. I was told that though the appointment is nominally for two years, two extra years are always granted, except in cases of gross negligence or misbehaviour. As to the yearly competition, for which all *internes* are supposed to enter, it is in reality restricted to the most active and intelligent. Those who know they have no chance of success refrain from entering the lists. One of the "*internes*" had assisted at an operation that morning. He described the patient as having been anaesthetised on his bed and wheeled on a sort of tricycle-bed through the ward. Then, placed on a stretcher, he was carried to the "Récamier Pavilion" where important operations are performed. The *interne* pharmacist's duty in these cases, I understood, was to sterilise the instruments and hand them to the doctor as

required, and generally see that the antiseptic precautions were rigidly observed.

Not that anaesthetics are abused at Laënnec. On the contrary, I was told that this particular doctor never chloroformed except when absolutely necessary. Hypodermic injections of cocaine are used whenever possible in preference. I did not see the operating-theatre myself, but, strolling round the hospital after lunch with a couple of the *internes*, we looked in at the *post-mortem* room, where a youthful Sawbones was cheerfully humming a tune to the cadence of his hammer-strokes on the skull of a corpse; a cigarette between his lips, doubtless as a disinfectant. My companions, though pharmacists, were evidently used to the ghastly



THE DISTRIBUTORS OF THE MEDICINES.

sight, and held cheerful converse with their medical *confrère* as to the probable interesting character of the *post-mortem*. Returning to the pharmacy, I was shown how a sheet of requirements is drawn up weekly and sent to the Pharmacie Centrale des Hôpitaux, whence all supplies are drawn. Besides the chief pharmacist (M. Bourquelot) and the five *internes* there is a superintendent, and two porters for the rough work. I could not help noticing the great respect—I was almost going to write awe—with which everyone treated my youthful companions during our promenades throughout the hospital.

The wards of the Paris hospitals are not perhaps so neat as those in London, and the visitor may miss the almost coquettish style of the nurses' costumes in certain first-class London institutions; but the visitor cannot help observing the scrupulous cleanliness of the whole building, as well as of the uniforms of the *garde-malades* and patients. There is a regular hierarchy among the nurses, of course, and the white-capped *filles de salle* who shows zeal and discretion in due time receives the little black bow of the *sous-surveillante*, and may even reach the raven headdress which distinguishes the *surveillante* herself. Stoppage of holidays and dismissal, and, on the other hand, a prospect of promotion with increased pay, are found sufficient to ensure proper service. All the nurses are *infirmières laïques*, the Sisters of Charity, who formerly held such an important position in the Paris hospitals, are now only retained in two—*i.e.*, the Hôtel Dieu and the St. Louis (skin) Hospital.

DOBBINS: "These druggists are robbers. I just had a prescription filled, and they charged me \$2 for it." BOBBINS: "Oh, that is easy. Why, I had a doctor's prescription filled the other day and it cost me \$75!" DOBBINS: "Heavens!" BOBBINS: "Yes; the doctor prescribed a bicycle for my wife, and I had to get it for her."—Puck.

THE subjoined list refers to companies registered in England and Wales, and gives the returns up to the end of October 1897.

The arrangement is alphabetical according to the surnames or first names of the titles of the companies.

We incorporate in the directory sketches of a few of the principal shops of the leading company pharmacies.

A

Aldgate Drug Stores (Ltd.).—Regd. May 1, 1895.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 116 High Street, Whitechapel, London, E. Return made up to Aug. 4; filed Aug. 14, 1896. 1,000 shares taken up, 13*s.* 9*d.* per share called, and 687*l.* 10*s.* paid.

Alexander (Ltd.).—Regd. Aug. 9, 1890.—Cap. 2,000*l.*, in 1*l.* shares. Botanic medicine mfrs. and druggists. Regd. Off., 21 Soresby Street, Chesterfield. Return made up to Feb. 16; filed Feb. 22, 1897. 600 shares taken up, 160 issued as paid, and 440*l.* received.

Allen & Hanburys (Ltd.).—Regd. Dec. 29, 1893.—Cap. 75,000*l.*, in 250 Ord. and 500 Pref. shares of 100*l.* each. Mfg. chemists. Regd. Off., Plough Court, 37 Lombard Street, London, E.C. Return made up to Feb. 4; filed Feb. 10, 1897. All Ord. and 426 Pref. shares taken up, 225 Ord. and 400 Pref. shares issued as paid. Full amount called on remainder, and 5,100*l.* received.

E. & H. Allison (Ltd.).—Regd. Sept. 4, 1893.—Cap. 10,000*l.*, in 10*l.* shares. Wholesale druggists, drysalters, and chemists. Regd. Off., 11 Blanket Row, Hull. Return made up to June 2; filed June 3, 1897. 900 shares taken up, 893 issued as paid, and 70*l.* received.

Angier Chemical Company (Ltd.).—Regd. Feb. 18, 1895.—Cap. 5,000*l.*, in 1*l.* shares. Vendors of petroleum-emulsion and other meds. Regd. Off., 32 Snow Hill, London, E.C. Return made up to May 31; filed Aug. 6, 1897. All shares taken up, and issued as paid. Albert E. Angier, mfg. chemist, of Boston, U.S.A., holds 2,472 shares.

Anglo-American Drug Company (Ltd.).—Regd. May 24, 1880.—Cap. 46,070*l.*, in 10*l.* shares. Regd. Off., 33 Farringdon Road, London, E.C. Return made up to and filed on Oct. 17, 1897. All shares taken up, and the full amount paid.

Anhelakon (Ltd.).—Regd. Nov. 21, 1892.—Cap. 15,000*l.*, in 1*l.* shares. Wholesale and retail chemists and druggists. Dissolved Sept. 15, 1896.

R. Appleyard & Co. (Ltd.).—Regd. April 7, 1893.—Cap. 600*l.*, in 1*l.* shares. Chemists, druggists, and dentists. Regd. Off., 50 Park Lane, Little Horton, Bradford. Return made up to Aug. 30; filed Aug. 31, 1897. All shares taken up, and 600*l.* received.

Aston Drug Company (Ltd.).—Regd. Sept. 16, 1889.—Cap. 1,000*l.*, in 1*l.* shares. Dissolved May 5, 1896.

Atherton Drug Company (Ltd.).—Regd. Dec. 14, 1894.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 1 Commercial Yard, Wigan. Return made up to Nov. 26; filed Dec. 28, 1896. 1,355 shares taken up, and 1,355*l.* received.

Auto-Cure Patents Syndicate (Ltd.).—Regd. May 6, 1897.—Cap. 13,012*l.*, in 1*l.* shares. Regd. Off., Hibernia Chambers, Southwark, London, S.E. Return made up to Sept. 7; filed Sept. 11, 1897. 10,010 shares taken up, 10,000 issued as paid, and 10*l.* received.

B

Banner, Son, & Co. (Ltd.).—Regd. May 2, 1890.—Cap. 1,000*l.*, in 1*l.* shares. Chemists. Regd. Off., 179 London Road, Liverpool. Return made up to Oct. 19; filed Oct. 7, 1897. 357 shares taken up, 300 issued as paid, and 57*l.* paid.

Barclay & Sons (Ltd.).—Regd. June 26, 1896.—Cap. 60,000*l.*, in 1*l.* shares (40,000 Pref.). Wholesale druggists, pat. med. vendors, and druggists' sundriesmen. Reconstruction of company of the same name. Regd. Off., 95 Farringdon Street, London, E.C. Return made up to April 28; filed May 11, 1897. 34,977 Pref. and 19,171 Ord. shares taken up, and all issued as fully-paid. 829*l.* paid on 829 surrendered shares.

M. Bardill (Ltd.).—Regd. Oct. 23, 1895.—Cap. 500*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 14 Market Place, Dtrby. 357 shares taken up, and 357*l.* paid on March 6, 1896. Resolution for voluntary liquidation passed May 11, 1896.

John Barker & Co. (Ltd.).—Regd. June 26, 1894.—Cap. 330,000*l.*, in 22,000 Pref. shares of 5*l.* each, and 215,000 Ord. and 5,000 Management shares of 1*l.* each. General store-keepers and chemists and druggists (taking over the business of an unlimited company known as "John Barker & Co."). Regd. Off., 83 Kensington High Street, London, W. Return made up to May 5; filed May 13, 1897. All the Pref. and Management and 165,000 Ord. shares taken up, and 7,000 Pref., 55,000 Ord., and 5,000 Management shares issued as paid. Full amount called on the others, and 185,000*l.* received.

Barrett & Tatham (Ltd.).—Regd. Oct. 12, 1895.—Cap. 7,500*l.*, in 5*l.* shares. Chemical mfrs. Regd. Off., Castleton Chemical-works, Castleton, near Rochdale. Return made up to Feb. 25; filed March 11, 1896. 1,000 shares taken up, 995 issued as paid, and no calls made on the others.

Barton and North Lincolnshire Drug and Aërated Water Company (Ltd.).—Regd. April 6, 1893. Cap. 5,000*l.*, in 1*l.* shares. Dissolved Sept. 15, 1896.

James Bates (Ltd.).—Regd. July 16, 1890.—Cap. 1,000*l.*, in 1*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 82 New Street, Wellington, Salop. Return made up to July 26; filed Aug. 3, 1897. All shares taken up and paid for in full.

Bax & Co. (Ltd.).—Regd. July 16, 1897.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 131 High Street, Putney, London, S.W. No returns.

Baynes (Ltd.).—Regd. July 15, 1890.—Cap. 2,000*l.* in 1*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 20 Parliament Street, York. Return made up to April 7; filed April 14, 1897. 707 shares taken up, and 700 issued as paid. 10*s.* per share called on 7, and 3*l.* 10*s.* received.

Beach & Barnicott (Ltd.).—Regd. Nov. 22, 1890.—Cap. 15,000*l.*, in 10*l.* shares. Chemists, druggists, and mfrs. of proprietary articles. Regd. Off., East Street, Bridport. Return made up to July 11; filed Sept. 4, 1897. 750 shares taken up, and all issued as fully paid.

Bekosine Company (Ltd.).—Regd. July 7, 1897.—Cap. 1,000*l.*, in 1*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 15 Hammet Street, Taunton. Return made up to Aug. 6; filed Aug. 9, 1897. 507 shares taken up, 500 issued as paid, and 1*l.* received, leaving 6*l.* in arrears. Herbert Holgate, chemist, holds 501 shares.

F. B. Bengier & Co. (Ltd.).—Regd. March 10, 1891.—Cap. 40,000*l.*, in 2*l.* shares. Mfg. and wholesale chemists. Regd. Off., Otter Works, Mary Street, Strangeways, Manchester. Return made up to and filed on April 27, 1897. All shares taken up, 19,990 issued as paid, and 20*l.* received.

Joseph Bentley (Ltd.).—Regd. Jan. 13, 1897.—Cap. 6,000*l.*, in 10*l.* shares. Mfg. chemists. Regd. Off., Barrow-upon-Humber, Lincs. Return made up to May 15; filed May 22, 1897. All shares taken up, 550 issued as paid, 500*l.* received. Joseph Bentley, mfg. chemist, holds 551 shares.

Berry's Drug Stores (Ltd.).—Regd. April 10, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 117 Market Street, Farnworth, Lancs. Return made up to May 8; filed May 11, 1897. 708 shares taken up, 700 issued as paid, and 8*l.* received.

Alfred Bishop & Sons (Ltd.).—Regd. Dec. 31, 1891.—Cap. 25,000*l.*, in 20*l.* shares. Mfg. and wholesale chemists and druggists. Regd. Off., 48 Spelman Street, Mile End New Town, London, E. Return made up to and filed on Feb. 8, 1897. All shares taken up and issued as paid.

Bleasdale (Ltd.).—Regd. July 12, 1894.—Cap. 50,000*l.*, in 5*l.* shares. Mfg., wholesale, and retail chemists and druggists. Regd. Off., 23 Colliergate, York. Return made up to March 10, filed March 13, 1897. 4,885 shares taken up, full amount called, and 24,425*l.* received.

J. H. Blunt & Sons (Northampton Drug and General Supply Company) (Ltd.).—Regd. April 2, 1887.—Cap. 12,000*l.*, in 5*l.* shares. Regd. Off., 2 The Parade, Northampton. Return made up to Feb. 4; filed Feb. 10, 1897. 1,577 shares taken up, 5*l.* per share called on 977 and 4*l.* per share on 600, and 7,285*l.* received.

William Blythe & Co. (Ltd.).—Regd. Jan. 22, 1892.—Cap. 50,000*l.*, in 10*l.* shares. Mfg. chemists and druggists. Regd. Off., Holland Bank Works, Oswaldtwistle, Lancs. Return made up to May 12; filed May 27, 1897. 2,457 shares taken up, 1,200 issued as paid, and 12,570*l.* received.

Boots (Ltd.).—Regd. April 25, 1892.—Cap. 180,000*l.*, in 100,000 Pref. and 80,000 Ord. shares of 1*l.* each. Retail chemists and druggists. Regd. Off., 14 Island Street, Nottingham. Return

Briggs & Co. (Ltd.).—Regd. July 6, 1892.—Cap. 2,000*l.*, in 1*l.* shares. Drug-merchants and chemists. Regd. Off., 27 Market Street, Hebdon Bridge, near Manchester. Return made up to and filed on Aug. 5, 1897. 407 shares taken up, 250 issued as paid, and 157*l.* received.

Bright's Pure Drug Company (Ltd.).—Regd. Aug. 29, 1894.—Cap. 5,000*l.*, in 1*l.* shares. Present address not known. Will be struck off the Register.

British and Foreign Chemical Company (Ltd.).—Regd. Dec. 13, 1895.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 32 High Road, Beeston, Notts. Return made up to April 23; filed April 23, 1896. 550 shares taken up, 10*l.* per share called, and 275*l.* paid. The shareholders include four chemists.

British and Foreign Druggists' Company (Ltd.).—Regd. June 3, 1896.—No capital, but has a membership of 20, who are each liable for 1*l.* No off. or returns filed.

British Druggists (Ltd.).—Regd. May 27, 1895.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 219 Oxford Street, London, W. Return made up to Sept. 10; filed Oct. 15, 1896. All shares taken up and issued as fully paid.

British Medicinal Capsules Company (Ltd.).—Regd. Jan. 1, 1896.—Cap. 1,500*l.*, in 1*l.* shares. Regd. Off., 109 Euston Road, London, N.W. Return made up to March 11; filed April 1, 1897. 105 shares taken up, 100 issued as paid, and 5*l.* received.

Austin Brookes (Ltd.).—Regd. July 22, 1896.—Cap. 1,000*l.*, in 1*l.* shares. Surgical instrument mfrs., chemists, and druggists. Regd. Off., 17 Southampton Street, High Holborn, London, W.C. Return made up to Sept. 23; filed Oct. 14, 1896. 16 shares taken up, and 16*l.* paid. Resolution passed July 19, 1897, for voluntary liquidation, with W. C. Cockson as liquidator.

Joseph Brooks & Co. (Ltd.).—Regd. July 24, 1895.—Cap. 20,000*l.*, in 10*l.* shares. Mfg., wholesale, and retail chemists and druggists. Regd. Off., 42 Shudehill, Manchester. Return made up to Sept. 8; filed Sept. 9, 1896. 1,496 shares taken up, and 1,485 issued as paid. Full amount called and 110*l.* paid on the others.

J. Brown & Co. (Ltd.).—Regd. Feb. 2, 1897.—Cap. 12,000*l.*, in 100*l.* shares. Tar-distillers and mfg. chemists. Regd. Off., Chemical works, Savile Town, near Dewsbury. Return made up to April 24; filed April 27, 1897. 103 shares taken up, and 70 issued as paid. 100*l.* per share called and paid on 7 shares, and nothing on the others. Joseph Brown, chemist, holds 66 shares.

Brown & Gradidge (Ltd.).—Regd. July 15, 1887.—Cap. 4,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 19 High Street, Andover, Hants. Return made up to March 1; filed March 8, 1897. 2,750 shares taken up, 2,500 issued as paid, and 750*l.* received.

Bullus & Co. (Ltd.).—Regd. May 12, 1890.—Cap. 1,000*l.*, in 20*l.* shares. Chemists and druggists. Regd. Off., 262 High Street, West Bromwich, Staffs. Return made up to Dec. 21; filed Dec. 29, 1896. 40 shares taken up, and 800*l.* received.

W. J. Bush & Co. (Ltd.).—Regd. March 17, 1897.—Cap. 250,000*l.*, in 25,000 Pref. shares of 5*l.*, and 125,000 Ord. shares of 1*l.* each. Mfg. chemists, distillers, and essence mfrs. Regd. Off., 26 Artillery Lane, Bishopsgate, London. Return made up to July 22; filed Aug. 6, 1897. All shares taken up, and Ord. issued as paid. Full amount called on Pref., and 125,000*l.* received.

Bute Drug Stores (Ltd.).—Regd. May 27, 1895.—Cap. 300*l.*, in 1*l.* shares. Regd. Off., 30 Louisa Street, Docks, Cardiff. Return made up to Oct. 30; filed Nov. 10, 1896. All shares taken up, 11*l.* per share called, and 165*l.* received.

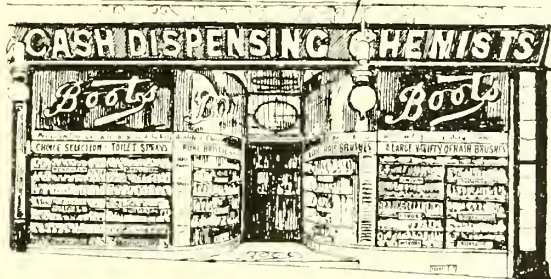
C

C. Carrington & Son (Ltd.).—Regd. Sept. 12, 1892.—Cap. 3,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., Victoria Buildings, Heaton Lane, Stockport. Return made up to Jan. 26; filed Feb. 2, 1897. 400 shares taken up, and 2,000*l.* paid.

Campbell, Cash Chemist (Ltd.).—Regd. Sept. 30, 1893.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 20 Island Street, Nottingham. Return made up to Feb. 29; filed March 6, 1896. 200 shares taken up, and 200*l.* paid.

Cash Supply Stores (Ltd.).—Regd. April 6, 1889.—Cap. 12,000*l.*, in 4*l.* shares. Chemists, druggists, grocers, &c. Regd. Off., 53 Crown Street, Halifax. Return made up to June 7; filed June 14, 1897. All shares taken up, and 2,594 issued as paid. 4*l.* per share called on the others, and 1,624*l.* received.

Celladema (Ltd.).—Regd. July 7, 1897.—Cap. 25,000*l.*, in 5*l.* shares. Veterinary surgeons, chemists and druggists. No off. or returns filed.



Boots's CHIEF SHOP IN NOTTINGHAM.

made up to Dec. 14; filed Dec. 28, 1896. 63,794 Pref. and 52,700 Ord. taken up, and 60,000 issued as paid; 51,494*l.* received on the others.

Boots, Cash Chemists (Western) (Ltd.).—Regd. March 27, 1897.—Cap. 160,000*l.*, in 1*l.* shares (90,000 Pref.). Regd. Off., Island Street, Nottingham. Return made up to July 2; filed July 9, 1897. 47,000 of each class taken up, and 47,000 issued as paid, while the full amount has been paid on the others.

Boyril (Ltd.).—Regd. Nov. 19, 1896.—Cap. 2,000,000*l.*, in 1*l.* shares. Extract-of-meat mfrs. Regd. Off., 8 Farringdon Avenue, London, E.C. Return made up to March 5; filed March 9, 1897. All shares taken up, full amount called, 1,997,855*l.* 10*s.* received, and 2,144*l.* 10*s.* in arrears.

Bowman & Co. (Ltd.).—Regd. Jan. 15, 1897.—Cap. 20,000*l.*, in 10*l.* shares. Chemical mfrs. Regd. Off., The Works, Widnes, Lancs. Return made up to May 18; filed May 24, 1897. 600 shares taken up, 5,927*l.* 10*s.* received, and 72*l.* 10*s.* in arrears.

James Boulton & Co. (Ltd.).—Regd. Dec. 18, 1890.—Cap. 8,000*l.*, in 10*l.* shares. Drug and chemical mfrs. and merchants. Regd. Off., Crayford Mills, Station Street, Stratford, London, E. Return made up to Feb. 23; filed March 11, 1897. All shares taken up and paid for in full.

Brazilian Chemical Company (Ltd.).—Regd. July 16, 1896.—Cap. 25,000*l.*, in 1*l.* shares. Mfg. chemists and druggists. Regd. Off., 22 Southampton Street, Bloomsbury, London. No returns.

Bridgwaters (Ltd.).—Regd. April 9, 1896.—Cap. 500*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 96 Hill Top, West Bromwich. Return made up to Aug. 22; filed Aug. 24, 1896. 122 shares taken up, 118*l.* received, and 4*l.* in arrears.

- Cerebos (Ltd.).**—Regd. April 16, 1894.—Cap. 50,000*l.*, in 1*l.* shares (8,000 Def.). Salt, chemical, and drug mfrs. Regd. Off., 1 St. Nicholas Buildings, Newcastle-on-Tyne. Return made up to Aug. 12; filed Aug. 19, 1897. 23,455 Pref. and 8,000 Def. taken up, and 200 Pref. and all Def. issued as paid. 12*s.* 6*d.* per share called on the others, and 14,378*l.* 2*s.* 6*d.* received, leaving 156*l.* 5*s.* in arrears.
- J. Chapman & Co. (Ltd.).**—Regd. Dec. 15, 1893.—Cap. 5,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., 1 Queen Street, Norwich. Return made up to May 4; filed May 6, 1897. 34 shares taken up, and 170*l.* paid.
- Chemical and Pharmaceutical Products Industrial Company (Ltd.).**—Regd. Dec. 16, 1896.—Cap. 50,000*l.*, in 10*l.* shares. No regd. off. or returns filed.
- Chemicals and Drugs Company (Ltd.).**—Regd. July 31, 1897.—Cap. 2,000*l.*, in 10*l.* shares. Regd. Off., 7 Hope Street, Piccadilly, Manchester. No returns.
- Chemists' Aerated and Mineral Waters Company (Ltd.).**—Regd. Aug. 6, 1878.—Cap. 50,000*l.*, in 1*l.* shares. Regd. Off., 45 Gifford Street, Caledonian Road, London, N. Return made up to Dec. 8; filed Dec. 9, 1896. 38,209 shares taken up, and 38,209*l.* paid.
- Chemists' Association (Ltd.).**—Regd. July 1, 1892.—Cap. 50,000*l.*, in 1*l.* shares. Wholesale chemists and druggists, and druggists' sundriesmen. Regd. Off., Curtain Row, London, E.C. Now in liquidation, under the supervision of the Court, with Frederick G. Painter, 19 Coleman Street, London, E.C., as the liquidator.
- Chemists' Co-operative Society (Ltd.).**—Regd. April 27, 1895.—Cap. 200,000*l.*, in 1*l.* shares (100,000 Pref.). Regd. Off., 37 Marsham Street, Westminster. Return made up to Jan. 13; filed Jan. 22, 1897. 12,608 Pref. and 11,029 Ord. shares taken up, and 9,800 shares issued as paid. 1*l.* per share called on 7,708 Pref. and 6,129 Ord., resulting in the receipt of 13,318*l.*, and leaving 519*l.* in arrears. 1,500 shares have been forfeited.
- Clarke & Co. (Ltd.).**—Regd. Nov. 17, 1892.—Cap. 500*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 3 Market Place, Harrow Green, Leytonstone, Essex. Return made up to March 17; filed March 23, 1897. 308 shares taken up, 300 issued as paid, and 8*l.* received.
- Clinical Research Association (Ltd.).**—Regd. Aug. 11, 1894.—Cap. 10,000*l.*, in 1*l.* shares. Analysts, chemists and druggists. Regd. Off., Alliance Chambers, 1 Southwark Street, London, S.E. Return made up to Nov. 20; filed Dec. 19, 1896. 509 shares taken up, and 509*l.* received.
- Coleberd & Co. (Ltd.).**—Regd. Dec. 12, 1896.—Cap. 4,000*l.*, in 5*l.* shares. Chemists and mineral-water mfrs. Regd. Off., High Street, Broughton, Hants. Return made on Feb. 22; filed Feb. 12, 1897. 561 shares taken up, 501 issued as paid, and 305*l.* received.
- Coleman & Co. (Ltd.).**—Regd. Nov. 16, 1887.—Cap. 160,000*l.*, in 2,200 shares of 50*l.* each, and 50,000 Pref. shares of 1*l.* each. Wholesale and retail chemists, druggists, and medicated-wine mfrs. Regd. Off., 10 South Quay, Great Yarmouth. Return made up to March 2; filed March 3, 1897. 2,093 50*l.* shares taken up, and 2,000 issued as paid. 50*l.* per share called on 93 shares, and 3,965*l.* 5*s.* paid, leaving 684*l.* 15*s.* in arrears.
- Collins & Co. (Ltd.).**—Regd. Nov. 3, 1887.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 124 Hebrew Road, Burnley, Lancs. Return made up to Dec. 29, 1896; filed Jan. 1, 1897. All shares taken up, and 1,000*l.* received.
- R. J. Comely & Co. (Ltd.).**—Regd. April 29, 1893.—Cap. 500*l.*, in 1*l.* shares. Chemists and druggists. Dissolved Sept. 15, 1896.
- Cooke (Ltd.).**—Regd. May 14, 1890.—Cap. 1,000*l.*, in 1*l.* shares. Pat. med. vendors and druggists. Regd. Off., 154 High Street, Stourbridge. Return made up to July 13; filed July 28, 1897. All shares taken up, and 1,000*l.* paid.
- Cook's Magic Annihilator Company (Ltd.).**—Regd. Oct. 5, 1897.—Cap. 1,000*l.*, in 5*s.* shares. Chemists and druggists, of George Green, Slough, Bucks. No office or returns filed.
- Co-operative Wholesale Drug Company (Ltd.).**—Regd. Sept. 18, 1894.—Cap. 25,000*l.*, in 10*l.* shares. Regd. Off., 7 Mincing Lane, London, E.C. Return made up to March 15; filed Sept. 22, 1897. 1,558 shares taken up, and 1,250 issued as paid. 8*l.* 12*s.* per share called on 300, and full amount on 8 shares. 2,580*l.* received, leaving 80*l.* in arrears.
- Coppen Brothers & Co.—**Regd. Nov. 14, 1892, as an unlimited company.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 12 Carey Street, Westminster, S.W. Return made up to Feb. 23; filed March 1, 1897. 500 shares taken up, and 500*l.* paid.
- Corbyn, Stacey & Co. (Ltd.).**—Regd. Jan. 1898.—Cap. 50,000*l.*, in 10*l.* shares. Chemists, druggists, and manufacturers and refiners of and dealers in drugs, perfumery, &c. Regd. Off., 22 Great St. Helen's, E.C.
- Cornell & Cornell (Ltd.).**—Regd. Aug. 2, 1897.—Cap. 3,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., 17 Museum Street, Ipswich. Return made up to Sept. 16; filed Sept. 18, 1897. 320 shares taken up, 274 issued as paid, and 230*l.* received.
- County Drug Company (Ltd.).**—Regd. May 13, 1893.—Cap. 2,000*l.*, in 1*l.* shares. Last return made up to March 16; filed March 26, 1895. 661 shares taken up, 500 issued as paid, and 161*l.* received. Not known at 86 Holton Road, Barry Dock, Glam. (given as regd. off.).
- County Drug Store (Ltd.).**—Regd. Jan. 23, 1897.—Cap. 500*l.*, in 1*l.* shares. Regd. Off., 197 Lancaster Road, Preston. Return made up to May 20; filed May 21, 1897. 350 shares taken up, and 350*l.* paid. Wm. E. Hewett, druggist, of office, holds 344 shares and acts as director and secretary.
- County Trading Company (Ltd.).**—Regd. July 28, 1894.—Cap. 15,000*l.*, in 1*l.* shares. Dispensing and family chemists and wholesale and retail druggists. Regd. Off., 76 English Street, Carlisle. Return made up to Jan. 29; filed July 2, 1897. 6,097 shares taken up, and 6,097*l.* paid.
- J. M. Crosby (Ltd.).**—Regd. June 21, 1896. Cap. 6,000*l.*, in 5*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 73 Newborough Street, Scarborough. Return made up to April 16; filed May 5, 1897. 368 shares taken up, and 1,840*l.* paid.
- Crystal Manufacturing Company (Ltd.).**—Regd. Feb. 25, 1896.—Cap. 35,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 4 Tokenhouse Buildings, London, E.C. Return made up to May 13; filed Aug. 19, 1897. 30,257 shares taken up, 30,000 issued as paid, 250*l.* received, and 7*l.* in arrears.
- Cyona Company (Ltd.).**—Regd. Sept. 22, 1892.—Cap. 10,000*l.*, in 1*l.* shares. Mfrs. of "Cyona" and all kinds of drugs, med., and restoratives. Regd. Off., 29 Fitzroy Street, Fitzroy Square, London, W. Return made up to and filed on April 6, 1897. 7,020 shares taken up, 4,000 issued as paid, and 3,020*l.* received.

D

- Daisy (Ltd.).**—Regd. Jan. 15, 1897.—Cap. 10,000*l.*, in 5*l.* shares. Mfg. chemists and druggists. Regd. Off., Faraday Works Holbeck Lane, Leeds. Return made up to May 8; filed May 18, 1897. 1,802 shares taken up, and 9,010*l.* received. John R. Ellis, mfg. chemist, holds 1,730 shares.
- Damian Drug and Speciality Company (Ltd.).**—Regd. Nov. 20, 1895.—Cap. 6,000*l.*, in 5*s.* shares. Chemists and druggists. Regd. Off., 7 Croft Chambers, Infirmary Street, Leeds. Return made up to April 1; filed March 24, 1896. 907 shares taken up, 300 issued as paid, and 151*l.* 15*s.* received.
- Humphrey Davy & Son (Ltd.).**—Regd. Feb. 14, 1889.—Cap. 4,000*l.*, in 10*l.* shares. Wholesale druggists and mfg. chemists. Regd. Off., Victoria Works, Masborough, Rotherham, Yorks. Return made up to Feb. 11; filed Feb. 13, 1897. 250 shares taken up, 5*l.* per share called, and 1,250*l.* paid.
- Day's Metropolitan Drug Company (Ltd.).**—Regd. July 16, 1897.—Cap. 100,000*l.*, in 1*l.* shares. Regd. Off., 4 St. Lawrence Road, Southampton. Return made up to August 8; filed August 19, 1897. 88 shares taken up, and 88*l.* paid. There are 46 chemists among the 49 shareholders.
- Day's Southern Drug Company (Ltd.).**—Regd. April 5, 1887, as "The Southern Drug Company (Ltd.)."—Cap. 40,000*l.*, in 1*l.* shares. Regd. Off., St. Lawrence Road, The Docks, Southampton. Return made up to Nov. 2; filed Nov. 7, 1896. 500 "A," 24,406 "B," 982 "C," and 8,810 "D" shares taken up. 10*s.* per share considered as paid on 19,206 "B" shares. 1*l.* per share called on 500 "A" and 8,810 "D," 15*s.* per share on 5,200 "B" and 982 "C," 5*s.* per share on 19,206 "B" shares, resulting in the total receipt of 18,748*l.*
- Delve's (Ltd.).**—Registered Sept. 22, 1897.—Capital 5,000*l.*, in 1*l.* shares. To acquire the business of Wm. H. Delve, drug-store keeper, 310 Stretford Road, Manchester. No returns.
- Digestive Salt Syndicate (Ltd.).**—Regd. Jan. 24, 1896.—Cap. 10,000*l.*, in 1*l.* shares. Regd. Off., 10 Lancaster Place, Strand, London, W.C. Return made up to June 6; filed June 8, 1896. 7 shares taken up, but no calls made.
- Dodd & Co. (Ltd.).**—Regd. Feb. 2, 1896.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 44 King Street Huddersfield. Return made up to May 10; filed May 21, 1897. 156 shares taken up, and 156*l.* paid. Wm. H. Cook, stationer, holds 150 shares.

F. W. Doubleday (Ltd.).—Regd. May 14, 1897.—Cap. 3,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 78 High Street, Dorking. Return made up to and filed on Sept. 14, 1897. All shares taken up, and 1,000*l.* paid. F. W. Doubleday, chemist, holds 993 shares.

Doveton's Drug Stores (Ltd.).—Regd. Nov. 11, 1895.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 818 Holloway Road, London, N. Return made up to March 12; filed March 24, 1896. 924 shares taken up, 800 issued as paid, and 124*l.* received.

Drug and Dispensing Stores (Ltd.).—Regd. July 27, 1891.—Cap. 5,000*l.*, in 5*l.* shares. Regd. Off., 26 Queen Street, Wolverhampton. Return made up to Dec. 11; filed Dec. 16, 1896. 624 shares taken up, 3*l.* per share called, and 1,782*l.* received.

E

James Eggo & Co. (Ltd.).—Regd. March 26, 1897.—Cap. 5,000*l.*, in 1*l.* shares. Mfg. and wholesale chemists and druggists. Regd. Off., 383 Stretford Road, Manchester. Resolution for voluntary liquidation passed May 15, and confirmed June 5, 1897.

Elberfeld Farbenfabriken Company (Ltd.).—Regd. Dec. 10, 1895.—Cap. 5,000*l.*, in 10*l.* shares. Chemical and drug mfrs. and merchants. Regd. Off., 20 Booth Street, Manchester. Return made up to July 29; filed July 30, 1897. All shares taken up, 2*l.* per share called, and 1,000*l.* paid.

Empire Drug Company (Ltd.).—Regd. Sept. 18, 1893.—Cap. 1,000*l.*, in 5*l.* shares. Regd. Off., 258A Mare Street, Hackney, London. Return made up to March 5; filed March 7, 1896. 86 shares taken up, 5*l.* per share called on 32, and 1*l.* per share on 54. 211*l.* paid, and 3*l.* in arrears.

English Pure Medicine Company (Ltd.).—Regd. Jan. 12, 1897.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 298 Winchester House, London, E.C. Return made up to March 23; filed March 30, 1897. 375 shares taken up, 5 issued as paid, and 370*l.* received.

J. C. Eno (Ltd.).—Regd. April 10, 1897.—Cap. 100,000*l.*, in 10*l.* shares. Mfrs. of "Eno's Fruit Salt" and other medicines. Regd. Off., Pomeroy Street, New Cross, S.E. Return made up to Aug. 10; filed Aug. 13, 1897. All shares taken up, 9,992 issued as paid, and 80*l.* received. James C. Eno, mfg. chemist, holds 9,878 shares.

James Epps & Co. (Ltd.).—Regd. March 25, 1893.—Cap. 200,000*l.*, in 5*l.* shares. Cocoa mfrs. and homoeopathic chemists. Regd. Off., Holland Street, Blackfriars, London. Return made up to and filed on Oct. 2, 1896. All shares taken up; 35,770 issued as paid, and 21,150*l.* paid on the others.

Evans & Sons (Ltd.).—Regd. Oct. 1, 1884 as "Evans, Sons & Co. (Ltd.)."—Cap. 50,000*l.* in 10*l.* shares. Wholesale chemists and druggists, of Montreal and Toronto. Regd. Off., 56 Hanover Street, Liverpool. Return made up to Feb. 14; filed Feb. 26, 1897. 2,313 shares taken up. 10*l.* per share called on 1,813, and 1*l.* per share on 500, and 18,155*l.* paid.

Everbon & Co. (Ltd.).—Reg. Nov. 30, 1895. Cap. 15,000*l.*, in 1*l.* shares. Wholesale and retail chemists and druggists. No office or returns filed.

F

Faithfull Brothers (Ltd.).—Regd. Feb. 9, 1897.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 10 Bedford Terrace, High Street, Kensington, W. Return made up to June 3; filed June 4, 1897. All shares taken up and issued as paid. Percy C. Faithfull, gentleman, holds 994 shares.

Robert Farrage & Sons (Ltd.).—Regd. Jan. 17, 1893.—Cap. 2,000*l.* in 1*l.* shares. Chemists and druggists. Regd. Off., Rothbury, Northumberland. Return made up to Feb. 19; filed Feb. 20, 1897. All shares taken up, and 2,000*l.* received.

Field, Breeze & Co. (Ltd.).—Regd. March 2, 1895.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 70 Oxtan Road, Birkenhead. Return made up to Feb. 15; filed Feb. 17, 1897. 102 shares taken up, and 102*l.* paid.

Jesse Fisher & Son (Ltd.).—Regd. Jan. 15, 1890.—Cap. 10,000*l.*, in 1*l.* shares. Mfg. chemists and instrument-makers. Regd. Off., Queen Street, Bradford, Manchester. Return made up to Nov. 10; filed Nov. 12, 1896. 1,526 shares taken up, 1,500 issued as paid, and 26*l.* received.

Fleming & Co. (Ltd.).—Regd. March 6, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Chemists, druggists, and opticians. Regd. Off., 107 Prescott Street, Liverpool. Return made up to June 3; filed June 12, 1897. 331 shares taken up, 100 issued as paid, and 231*l.* received.

Fleming's Oil and Chemical Company (Ltd.).—Regd. May 28, 1888.—Cap. 50,000*l.*, in 10*l.* shares. Regd. Off., 101 Leadenhall Street, London, E.C. Return made up to May 11; filed July 14, 1897. 2,500 shares taken up, and 490 issued with 8*l.* per share considered as paid. 10*l.* per share called on 2,010 and 2*l.* per share on 490, and 21,080*l.* received.

Fletcher's Drug Company (Ltd.).—Regd. April 20, 1893.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 108 Yorkshire Street, Rochdale. The final winding-up meeting was held on June 26, 1896.

Foggit's Drug Company (Ltd.).—Regd. May 7, 1896.—Cap. 10,000*l.*, in 10*l.* shares. Regd. Off., 29 Nevill Street, Southport. Return made up to Sept. 14; filed Sept. 30, 1897. All shares taken up, 7*l.* per share called, and 350*l.* received.

Forbes, Abbott & Lennard (Ltd.).—Regd. June 12, 1896.—Cap. 250,000*l.*, in 5,000 Pref. shares of 10*l.* each and 18,182 Ord. shares of 11*l.* each. Chemical mfrs. and mfg. chemists. Regd. Off., 70 Gracechurch Street, London, E.C. Return made up to Oct. 23; filed Nov. 3, 1896. 4,436 Pref. and 15,003 Ord. shares taken up. All Pref. shares issued as fully paid, and 9*l.* per share considered as paid on 14,899 Ord. shares. 9*l.* per share called on 104 Ord., and 936*l.* received.

Foreign Chemists (Ltd.).—Regd. June 23, 1894.—Cap. 52,000*l.*, in 10*l.* shares. Regd. Off., 83 Mortimer Street, Great Portland Street, London. Return made up to Aug. 12; filed Aug. 16, 1897. 5,067 shares taken up, 5,000 issued as paid, and 670*l.* received.

Formalin Hygienic Company (Ltd.).—Regd. March 30, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Chemical mfrs. Regd. Off., 10 St. Mary-at-Hill, London, E.C. Return made up to Sept. 21; filed Sept. 23, 1897. 6,107 shares taken up, 2,100 issued as paid, and 4,007*l.* received.

C. F. Fresson (Ltd.).—Regd. Nov. 13, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 26 Tontine Street, Hanley, Staffs. 7 shares taken up, and no calls made.

Fresson's Hanley Drug Company (Ltd.).—This company was dissolved on Dec. 31, 1895.

G

Galen Manufacturing Company (Ltd.).—Regd. July 10, 1897.—Cap. 20,000*l.*, in 5*l.* shares. Mfg. chemists and wholesale druggists. Regd. Off., Galen Works, Wilson Street, New Cross, London, S.E. Return made up to Aug. 6; filed Aug. 13, 1897. 3,340 shares taken up, and 3,314 issued as paid. 5*l.* per share called on 26,100*l.* received, and 30*l.* in arrears. John Moss, mfg. chemist, holds 3,314 shares.

Garman Brothers (Ltd.).—Regd. Sept. 17, 1894.—Cap. 5,000*l.*, in 1*l.* shares. Chemists and druggists. The company has never gone to allotment, and will be dissolved.

Garston Chemical Works (Ltd.).—Regd. Dec. 17, 1896.—Cap. 5,000*l.*, in 5*l.* shares. Regd. Off., the Albany, Old Hall Street, Liverpool. Return made up to Feb. 26; filed May 12, 1897. 847 shares taken up, 740 issued as paid, and 535*l.* received.

Gaulter & Co. (Ltd.).—Regd. July 30, 1892.—Cap. 300*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 6 West Street, Fleetwood, Lancs. Return made up to Dec. 14; filed Dec. 15, 1896. All shares taken up, and paid for in full.

General Remedies Company (Ltd.).—Regd. Jan. 7, 1897.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 11 Tudor Road, Cardiff. No returns.

Gibson, Hogg & Co., the Burton Pharmacy Company (Ltd.).—Regd. March 12, 1888. Cap. 5,000*l.*, in 5*l.* shares. Regd. Off., 85 New Street, Burton-on-Trent. Return made up to Feb. 12; filed March 13, 1897. 105 shares taken up, 100 issued as paid, and 25*l.* received.

H. Gilbertson & Sons (Ltd.).—Regd. Jan. 26, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Druggists' sundriesmen and chemists. Regd. Off., 11 St. Andrew's Street, Holborn, London, W.C. Return made up to May 28; filed June 1, 1897. 4,764 shares taken up, 4,730 issued as paid, and 34*l.* received.

D. Glasgow, Huxley & Co. (Ltd.).—Regd. Oct. 23, 1890.—Cap. 1,000*l.*, in 10*l.* shares. Chemists and druggists. Regd. Off., 178 Cemetery Road, Sheffield. Return made up to Feb. 15; filed Feb. 22, 1897. 16 shares taken up, and 160*l.* paid.

Golding & Co. (Ltd.).—Regd. March 31, 1896.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 172 Albany Road, London, N.W. Return made up to July 16; filed July 28, 1897. 710 shares taken up, 600 issued as paid, and 110*l.* received. Wm. D. Golding, chemist's assistant, holds 600 shares.

Goodall's Drug Company (Ltd.).—Regd. Aug. 22, 1892.—Cap. 4,000*l.*, in 1*l.* shares. Regd. Off., 74 Kirkgate, Bradford, Yorks. The business has been transferred to the Chemist's Co-operative Society (Ltd.) (*q.v.*).

Gordon, Murray & Co. (Ltd.).—Regd. July 18, 1892.—Cap. 10,000*l.*, in 1*l.* shares. Pat. med. mfrs., chemists and druggists. Regd. Off., 10 Adam Street, Strand, London, W.C. Return made up to Nov. 26; filed Dec. 2, 1896. 7,213 shares taken up, 6,000 issued as paid. 1,209*l.* received, and 4*l.* in arrears.

S. F. Goss (Ltd.).—Regd. July 13, 1895.—Cap. 20,000*l.*, in 10*l.* shares. Chemists, druggists, and drysalters. Regd. Off.,



GOSS'S, REGENT STREET.

460 Oxford Street, London, W. Return made up to Oct. 21; filed Oct. 28, 1896. 900 shares taken up, 300 issued as paid, and 6,000*l.* received.

F. Green & Co. (Ltd.).—Regd. June 14, 1897.—Cap. 15,000*l.*, in 1*l.* shares. Wholesale and retail chemists and druggists, drug-grinders, &c. Regd. Off., Phoenix Mills, 393 Farn Street, Birmingham. No returns.

Gregory & Wrenn (Ltd.).—Regd. March 24, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 15 East Street, Taunton. Return made up to Aug. 6; filed Aug. 7, 1897. 6,000 shares taken up, 4,834 issued as paid, and 1,166*l.* received. 5 chemists out of 8 shareholders.

Griffiths & Co. (Ltd.).—Regd. Sept. 2, 1896.—Cap. 2,500*l.*, in 1*l.* shares. Mfg. chemists and artificial manure mfrs. Regd. Off., 5 Fetter Lane, London, E.C. No returns.

Grove Company (Ltd.).—Regd. Feb. 23, 1894.—Cap. 5,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 17 Coleman Street, London, E.C. Return made up to Dec. 31, 1896; filed Feb. 8, 1897. 3,401 shares taken up, 10*s.* per share called, 1,225*l.* 10*s.* paid, and 475*l.* in arrears.

H

A. T. Hale Co. (Ltd.).—Regd. Dec. 8, 1896.—Cap. 2,000*l.*, in 1*l.* shares. Chemists. Regd. Off., 14 Broughton Road, Ealing Dean, W. Return made up to March 22; filed March 31, 1897. 625 shares taken up, and 450 issued as paid 10*s.* per share called on the others, and 78*l.* 15*s.* received leaving 8*l.* 15*s.* in arrears. A. T. Hale, chemist, of office, holds 450 shares.

F. Hallam & Son (Ltd.).—Regd. Oct. 10, 1893.—Cap. 8,000*l.*, in 10*l.* shares. Wholesale druggists and pat. med. vendors. Regd. Off., Dallow Street, Burton-on-Trent. Return made up to Nov. 5; filed Nov. 10, 1896. 350 shares taken up, 300 issued as paid, and 500*l.* received.

Hall Drug Company (Ltd.).—Regd. Dec. 20, 1892.—Cap. 1,500*l.*, in 1*l.* shares. Regd. Off., 74 Lumley Road, Skegness, Lincs. Return made up to July 8; filed July 23, 1896. 409 shares taken up, and 409*l.* received.

S. Harvey (Ltd.).—Regd. Aug. 14, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Arsenical-soap mfrs. and mfg. chemists. Regd. Off., 5 Denman Street, London Bridge, London, S.E. No returns.

Hatrick & Co. (Ltd.).—Regd. Oct. 17, 1889.—Cap. 4,000*l.*, in 1*l.* shares. Pat. med., drug, and chemical mfrs. Regd. Off., 31 Snow Hill, London, E.C. Return made up to Nov. 23, 1896; filed March 23, 1897. 2,018 shares taken up, 1,001 issued as paid, and 1,017*l.* Resolution for voluntary liquidation passed on Sept. 15, 1897, when Edwin J. Mazon was appointed liquidator.

William Hay (Ltd.).—Regd. Dec. 31, 1894.—Cap. 50,000*l.*, in 10*l.* shares. Wholesale and retail chemists and essence mfrs. Regd. Off., 4 Regent's Terrace, Anlaby Road, Hull. Return made up to April 10; filed Aug. 11, 1897. 3,624 shares taken up, and 2,500 issued as paid. Full amount called and 11,240*l.* paid on the others.

Heath's Herbal Strip Syndicate (Ltd.).—Regd. Dec. 19, 1896.—Cap. 2,000*l.*, in 10*s.* shares. Drug and pat. med. mfrs. Regd. Off., 156 Great Charles Street, Birmingham. Return made up to April 26; filed May 6, 1897. 1,227 shares taken up, 7*s.* 6*d.* per share called, 422*l.* 10*s.* received, and 37*l.* 12*s.* 6*d.* unpaid.

G. A. Heatley & Co. (Ltd.).—Regd. Aug. 25, 1894.—Cap. 1,000*l.*, in 1*l.* shares. Dispensing chemists and pat. med. vendors. Regd. Off., 61 Newport Road, Middlesborough, Yorks. Return made up to May 19; filed Oct. 13, 1896. 257 shares taken up, 250 issued as paid, and 7*l.* received.

Heatley, Janisch & Co. (Ltd.).—Regd. Dec. 14, 1889.—Cap. 3,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 7 Singleton House, Northumberland Street, Newcastle-on-Tyne. Return made up to Feb. 26; filed April 14, 1897. 2,400 shares taken up; 5*s.* per share called, and 600*l.* received.

Hednesford Drug Company (Ltd.).—Regd. Nov. 30, 1893.—Cap. 800*l.*, in 1*l.* shares. Regd. Off., Station Street, Hednesford, Staffs. Return made up to March 23; filed Aug. 24, 1897. All shares taken up, 10*s.* per share called, and 400*l.* paid.

Henwood & Co. (Ltd.).—Regd. May 10, 1897.—Cap. 2,000*l.*, in 1*l.* shares. Drug-merchants and pat. med. vendors. Regd. Off., Market Street, Liskeard, Cornwall. Return made up to July 29; filed July 26, 1897. 1,800 shares taken up, 1,000 issued as paid, and 800*l.* received. Philip B. Henwood, merchant, holds 1,294 shares.

Hewitt's (Ltd.).—Regd. June 19, 1895.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 41 Crook Street, Bolton. Return made up to Feb. 15; filed March 3, 1897. 328 shares taken up, and 321 issued as fully paid; 7*l.* has been paid on the rest.

Hicks & Co. (Ltd.).—Regd. May 27, 1889, as the "South Wales Wholesale Drug Company (Limited)."—Cap. 20,000*l.*, in 5*l.* shares. Regd. Off., 70 Queen Street, Cardiff. Return made up to Sept. 14; filed Nov. 19, 1896. 2,359 shares taken up, and 1,206 issued as paid. Full amount called on others, and 5,765*l.* received.

Hirst, Brooke & Hirst (Ltd.).—Regd. Jan. 16, 1893.—Cap. 40,000*l.*, in 4,000 Pref. and 4,000 Ord. shares of 5*l.* each. Mig. and wholesale chemists and druggists. Regd. Off., Millgarth Mills, East Lane, Leeds. Return made up to Nov. 12; filed Nov. 11, 1896. 3,847 Pref. and 2,292 Ord. shares taken up, and all issued as fully paid.

Hockley Chemical Company (Ltd.).—Regd. April 23, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Regd. Off., 1 Hockley Hill, Birmingham. Return made up to Aug. 12; filed Aug. 23, 1897. 5,200 shares taken up, and all issued as paid.

Hoe & Co. (Ltd.).—Regd. Feb. 4, 1897.—Cap. 25,000*l.*, in 5*l.* shares. Sauce mfrs., chemists, and druggists. Regd. Off., 79 Piccadilly, Manchester. Return made up to June 9; filed June 15, 1897. 3,003 shares taken up, 2,650 issued as paid, and 1,765*l.* received.

Hohenhausen & Co. (Ltd.).—Regd. Feb. 12, 1889.—Cap. 3,000*l.*, in 10*l.* shares. Mig. chemists and drysalters. Regd. Off., Exchange Street, Blackley, Manchester. Return made up to Feb. 25; filed March 10, 1897. 275 shares taken up, and 2,750*l.* received.

W. J. Holman & Co. (Ltd.).—Regd. July 2, 1895.—Cap. 250*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Higher Square, Holsworthy, Devon. Return made up to Feb. 15; filed March 15, 1897. 207 shares taken up, 200 issued as paid, and 7*l.* received.

Homoea (Ltd.).—Regd. March 31, 1897.—Cap. 250,000*l.*, in 1*l.* shares. Chemists, druggists, and pat. med. vendors. Regd. Off., 98 Strand, London, W.C. Return made up to Aug. 12; filed Aug. 18, 1897. 172,651 shares taken up, and 90,500 issued as paid. Full amount called, 44,894*l.* 15*s.* received, and 37,256*l.* 5*s.* in arrears.

Henry Hodder & Co. (Ltd.).—Regd. July 1, 1887.—Cap. 25,000*l.*, in 1*l.* shares. Wholesale and retail chemists and



THE FIRST CUTTING CHEMISTS' STORE.

druggists. Regd. Off., Albion Chambers, Bristol. Return made up to Sept. 18; filed Oct. 13, 1896. 24,975 shares taken up, 10,000 issued as paid, and 14,975*l.* received.

Homœopathic Manufacturing Company (Ltd.).—Regd. April 27, 1896.—Cap. 1,000*l.*, in 5*l.* shares. Regd. Off., 35 Blackfriars Street, Manchester. Return made up to July 22; filed July 29, 1897. 99 shares taken up, and 20 issued as paid. 5*l.* per share called on 59 and 1*l.* per share on 20, and 305*l.* received, leaving 10*l.* in arrears.

C. I. Hood & Co. (Ltd.).—Regd. May 21, 1896.—Cap. 10,000*l.*, in 1*l.* shares. Drug and pat. med. mfrs. Regd. Off., 34 Snow Hill, E.C. Return made up to Oct. 2; filed Oct. 1, 1896. All shares taken up, 9,994 issued as paid, and 6*l.* received. Charles I. Hood, mfg. chemist, of Lowell, Mass, U.S.A., holds 9,994 shares.

Hooper's Drug Stores (Ltd.).—Regd. July 29, 1896.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 59 High Street, Peckham, London, S.E. Return made up to Aug. 17; filed Aug. 25, 1897. 2,000 shares taken up, 664 shares issued as paid and 1,336*l.* received. 6 chemists out of 10 shareholders.

Hornblow & Co. (Ltd.).—Regd. March 28, 1894.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Swain Street, Watchet, Somerset. Return made up to May 6; filed May 12, 1897. 694 shares taken up, 500 issued as fully paid, and 194*l.* received.

Horsley & Co. (Ltd.).—Regd. Jan. 7, 1893.—Cap. 432*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 35 Queen Victoria Street, E.C. No business is now being done, and the secretary and all the directors have retired.

Horton & Co.—Regd. Oct. 31, 1890, as an unlimited company.—Cap. 2,500*l.*, in 10*l.* shares. Chemists and druggists. Regd. Off., 1 Park Crescent, Torquay, Devon. Return made up to Oct. 31, 1896; filed May 4, 1897. 237 shares taken up and 2,370*l.* received.

Howarth Drug Stores (Ltd.).—Regd. Oct. 5, 1896.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 6 Market Street, Shaw, Lancs. Return made up to Jan. 19; filed Jan. 20, 1897. 7 shares taken up, and 7*l.* paid.

Hull Drug Company (Ltd.).—Regd. Oct. 25, 1892.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 34 Whitefriargate, Hull. Return made up to Feb. 11; filed Feb. 15, 1897. All shares taken up, 250 considered as paid, and 1,750*l.* paid on the remainder.

J. Hulme & Co. (Ltd.).—Regd. Feb. 9, 1891.—Cap. 3,000*l.*, in 5*l.* shares. Wholesale druggists and drysalts. Regd. Off., 1 Back Greenwood Street, Oldham. Return made up to July 17; filed Aug. 3, 1897. All shares taken up, 593 issued as paid, and 35*l.* paid on the rest.

Humber Drug and Dispensing Company (Ltd.).—Regd. Nov. 11, 1893.—Cap. 500*l.*, in 1*l.* shares. Regd. Off., 76 Porter Street, Hull. Return made up to Jan. 11; filed Jan. 16, 1897. All shares taken up, and 500*l.* paid.

Hyde Drug Company (Ltd.).—Regd. Nov. 10, 1892.—Cap. 1,000*l.*, in 1*l.* shares. The final meeting in connection with its liquidation was held on March 3, 1897.

I

Imperial Eau de Cologne Company (Ltd.).—Regd. Aug. 27, 1897.—Cap. 5,000*l.*, in 1*l.* shares. Perfumers, chemists, druggists, &c. Regd. Off., 188 Goswell Road, London, E.C. No returns.

Indol Remedies Company (Ltd.).—Regd. June 11, 1896.—Cap. 5,000*l.*, in 1*l.* shares. Pat. med. mfrs. Regd. Off., 39 Victoria Street, Westminster, S.W. Return made up to Oct. 21; filed Oct. 21, 1896. 7 shares taken up, and no calls made.

J. H. Inman & Co. (Ltd.).—Regd. Feb. 27, 1887.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 45 Northumberland Street, Newcastle-on-Tyne. The business has been transferred to Inman's Supply Stores (Limited) (*q.v.*).

Inman's Supply Stores (Ltd.).—Regd. Jan. 20, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 45 Northumberland Street, Newcastle-on-Tyne. Return made up to May 27; filed Aug. 3, 1897. 4,301 shares taken up, 1,000 issued as paid, 3,267*l.* received, and 34*l.* left in arrears.

International Drug Company (Ltd.).—Regd. April 25, 1889.—Cap. 6,000*l.*, in 225 10*l.* and 3,750 1*l.* shares. The final meeting in connection with its liquidation was held on March 31, 1897.

Ison & Sons (Ltd.).—Regd. Sept. 12, 1890.—Cap. 1,000*l.*, in 1*l.* shares (5 Pref.). Chemists, druggists, and pat. med. vendors. Regd. Off., 86 New Street, Wellington, Salop. Return made up to March 18; filed April 7, 1897. All shares taken up and paid for in full.

Adam William Ison & Co. (Ltd.).—Regd. May 21, 1894.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 1 King's Head Buildings, Darlington. Return made up to Dec. 23; filed Dec. 24, 1896. All shares taken up, 15*s.* per share called and 750*l.* received.

Ison's Eye and Ear Dispensary (Ltd.).—Regd. April 30, 1897.—Cap. 400*l.*, in 1*l.* shares. Oculists, aurists, chemists, and druggists. Regd. Off., 71 Great George Street, Leeds. Return made up to June 26; filed June 30, 1897. 400 shares taken up, and 400*l.* received.

J

Jabez Jackson & Co. (Ltd.).—Regd. Dec. 22, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 2 Parliament Street, Leicester. Return made up to July 1; filed Aug. 9, 1895. 912 shares taken up, and 800 issued as paid. 82*l.* received, and 30*l.* in arrears.

Jackson Drug Company (Ltd.).—Regd. Oct. 29, 1896.—Cap. 3,000*l.*, in 1*l.* shares. Regd. Off., 7 and 9 Lark Hill, Blackburn. Return made up to Jan. 25; filed Jan. 26, 1897. 756 shares taken up, 750 issued as paid, and 6*l.* in arrears. Thomas Howarth, chemist, holds 750 shares.

Jardine & Co. (Ltd.).—Regd. Oct. 10, 1894.—Cap. 250*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 6 Queen's Parade, Alexandra Road, Cleethorpes, Lincolnshire. Return made up and filed on Jan. 31, 1896. All shares taken up, and 250*l.* paid.

Jessop's Stores (Ltd.).—Regd. March 8, 1897.—Cap. 5,000*l.*, in 1*l.* shares. Grocers, chemists, and druggists. Regd. Off., 60 Wakefield Road, Bradford. Return made up to June 23; filed July 9, 1897. 3,006 shares taken up, 3,000 issued as paid, and 6*l.* received.

Philadelphus Jeyes & Co. (Ltd.).—Regd. Aug. 23, 1894.—Cap. 20,000*l.*, in 10*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 6 The Drapery, Northampton. Return made up to Oct. 24; filed Nov. 6, 1896. 370 shares taken up and issued as fully paid.

Jones Brothers & Co.—Regd. as an unlimited company on Jan. 27, 1893.—Cap. 2,000*l.* in 1*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 358 Holloway Road, London, N. Return made up to Jan. 12; filed Jan. 19, 1896. All shares taken up, 5*s.* per share called, and 500*l.* received.

K

Kay Brothers (Ltd.).—Regd. April 28, 1887.—Cap. 100,000*l.*, in 9,900 10*l.* Ord. and 100 1*l.* Founders' shares. Mfg. chemists, druggists, drysalts, &c. Regd. Off., St. Petersgate, Stockport. Return made up to May 21; filed May 22, 1897. 7,120 Ord. and 100 Founders' shares taken up, and all issued as fully paid.

John Kaye (Ltd.).—Regd. March 21, 1894.—Capital 5,000*l.*, in 10*l.* shares. Pat. med. mfrs. and mfg. chemists. Regd. Off., 12 Bride Lane, Fleet Street, London, E.C. All shares taken up, 7*l.* per share called, and 3,500*l.* received. Resolution passed April 27, and filed May 12, 1896, for voluntary liquidation, with John Wyld and H. E. Kaye as liquidators.

Kemp & Co. (Ltd.).—Regd. April 24, 1890.—Cap. 600*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 220 Holloway Road, London, N. Return made up to Sept. 1; filed Sept. 5, 1896. All shares taken up, and 600*l.* paid.

Kempson & Co. (Ltd.).—Regd. Oct. 19, 1896.—Cap. 25,000*l.*, in 10*l.* shares. Chemical mfrs., of Pye Bridge, Alfreton, Derby. No returns.

Kent Drug Stores (Ltd.).—Regd. June 8, 1895.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 48 High Street, Tunbridge Wells. 7 shares taken up, and 7*l.* paid. Present address not known.

Kernick & Son (Ltd.).—Regd. Aug. 13, 1892.—Cap. 5,000*l.*, in 5*l.* shares. Wholesale and mfg. chemists. Regd. Off., Edgecumbe Works, 10 Wellington Terrace, Cardiff. Return made up to Dec. 11; filed Dec. 14, 1896. 785 shares taken up, and 400 issued as paid; 2*l.* 10*s.* per share called on the others, and 902*l.* 10*s.* received, leaving 60*l.* in arrears.

W. H. Kerr (Ltd.).—Regd. June 22, 1891.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 9 New Bond Street, London, W. Resolution passed March 11, 1896, for voluntary liquidation.

S. Keys & Co. (Ltd.).—Regd. June 15, 1887.—Cap. 10,000*l.*, in 10*l.* shares. Mfg. chemists. Regd. Off., Charles Street, West Bromwich, Staffs. Return made up to June 7; filed June 10, 1897. 400 shares taken up, 392 issued as paid, and 80*l.* received.

H. & T. Kirby & Co. (Ltd.).—Regd. Dec. 31, 1884.—Cap. 100,000*l.*, in 10*l.* shares. Mfg. chemists. Regd. Off., 14 Newman Street, Oxford Street, London, W. Return made up to May 4; filed May 6, 1897. 8,542 shares taken up, 8,180 issued as paid, and 3,620*l.* received.

Kirk's Drug Stores (Ltd.).—Regd. May 21, 1896. Cap. 1,500*l.*, in 1*l.* shares. Regd. Off., 63 Heaton Road, Newcastle-on-Tyne. Return made up to and filed on Oct. 4, 1897. 700 shares taken up, and 700*l.*

H. W. Knowles & Co. (Ltd.).—Regd. Aug. 1, 1895.—Cap. 1,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., 11 Bradford Road, Cleckheaton, Yorks. Return made up to Oct. 29; filed Oct. 27, 1896. 108 shares taken up, 97 issued as paid, and 55*l.* received.

Kolawitch Company (Ltd.).—Regd. March 6, 1897.—Cap. 4,200*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Bentinck Buildings, Wheelergate, Nottingham. Return made up to Sept. 29; filed Oct. 1, 1897. 2,400 shares taken up, and 400 issued as paid; 5*s.* per share called on the others, and 400*l.* received.

S. Kutnow & Co. (Ltd.).—Regd. April 2, 1896.—Cap. 20,200*l.*, in 1*l.* shares (200 Founders'). Vendors of meds. and medicated articles. Regd. Off., 41 Farringdon Road, London, E.C. Return made up to July 21; filed July 26, 1897. All shares taken up, 10,100 issued as paid, and 10,100*l.* received.

L

Henry Lamplough (Ltd.).—Regd. June 5, 1886.—Cap. 100,000*l.*, in 5*l.* shares. Wholesale and retail chemists. Regd. Off., 113 Holborn, London, W.C. Return made up to Aug. 4; filed Aug. 11, 1897. 13,268 shares taken up, and 3,080 issued as paid. 3*l.* per share called on the others, and 30,761*l.* 10*s.* received, including 197*l.* 10*s.* paid on 379 forfeited shares.

Lawson & Co. (Ltd.).—Regd. Oct. 15, 1894.—Cap. 2,000*l.*, in 5*l.* shares. Chemists and druggists. 9 shares taken up and 9*l.* received. Present address not known.

Edward Lee (Ltd.).—Regd. May 19, 1896.—Cap. 500*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 22 Great Winchester Street, E.C. No returns.

Leslie's (Ltd.).—Regd. Aug. 18, 1893.—Cap. 12,000*l.*, in 600 Pref. and 600 Def. shares. Medical and surgical plaster mfrs. and druggists' sundriesmen. Regd. Off., Bond Court House, Walbrook, London, E.C. Return made up to Aug. 14; filed Nov. 17, 1896. 595 Pref. and all Def. shares taken up, and the latter issued as paid. 10*l.* per share called on 211 and 8*l.* 15*s.* per share on 384, and 5,470*l.* received.

Levinstein (Ltd.).—Regd. June 26, 1895.—Cap. 90,000*l.*, in 10*l.* shares. Mfrs. of and dealers in chemicals, drugs, and pharmaceutical preparations. Regd. Off., 21 Minshall Street, Manchester. Return made up to July 30; filed Aug. 3, 1897. All shares taken up and 7,330 issued as paid. Full amount called on 1,000 and 7*l.* 10*s.* per share on 670, and 15,025*l.* received.

Lewis & Burrow's Drug Stores (Ltd.).—Regd. March 22, 1895.—Cap. 100,000*l.*, in 30,000 Pref., 100 Def., and 69,900 Ord. shares of 1*l.* each. Regd. Off., 22 and 24 Great Portland Street, London, W. Return made up to April 8; filed June 2,



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1897. 29,995 Pref., 100 Def., and 49,890 Ord. shares taken up, and 100 Def. and 18,100 Ord. issued as paid. Full amount called on the others, and 56,764*l.* 17*s.* 6*d.* received, leaving 20*l.* 2*s.* 6*d.* in arrears.

Lewis's (Ltd.).—Regd. June 27, 1893.—Cap. 10,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 40 Ranelagh Street, Liverpool. Return made up to July 16; filed July 20, 1897. 5,500 shares taken up, and 5,500*l.* received.

Liverpool Drug Company (Ltd.).—Regd. Nov. 2, 1894.—Cap. 500*l.*, in 1*l.* shares. Regd. Off., 76 London Road, Liverpool. Return made up to Dec. 17, 1895; filed Jan. 9, 1896. 150 shares taken up, and 150*l.* paid.

C. Frank Lloyd (Ltd.).—Regd. Nov. 23, 1894.—Cap. 1,000*l.*, in 1*l.* shares. Homeopathic storekeepers and chemists. Regd. Off., 70 Darlington Street, Wolverhampton. Return made up to Jan. 31; filed Jan. 26, 1897. 359 shares taken up, 350 issued as paid, and 9*l.* received.

Lombard Manufacturing Company (Ltd.).—Regd. Oct. 6, 1893.—Cap. 3,000*l.*, in 1*l.* shares. Mfg. chemists and druggists. Present address not known. Return made up to Feb. 20; filed Feb. 28, 1894. 1,017 shares taken up, 1,000 issued as paid, and 17*l.* received.

London and Counties Stores (Ltd.).—Regd. Jan. 7, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Oil, colour, and pat. med. mfrs., chemists, and druggists. Regd. Off., 16 Southwark Street, London, S.E. Return made up to May 19; filed May 20, 1897. 7,506 shares taken up, 7,500 issued as paid, and 6*l.* received.

London and County Drug Stores (Ltd.).—Regd. May 31, 1892.—Cap. 5,000*l.*, in 1*l.* shares. Dissolved on Sept. 15, 1896.

London and Suburban Pure Drug Company (Ltd.).—Regd. Nov. 1, 1894.—Cap. 3,000*l.*, in 1*l.* shares. Regd. Off., 47 Blackfriars Road, London, S.E. Return made up to Feb. 17; filed Feb. 22, 1896. 408 shares taken up, 401 issued as paid, and nothing called on the others.

London Drug and Dental Company (Ltd.).—Regd. June 4, 1890.—Cap. 7,500*l.*, in 1*l.* shares. Regd. Off., 10 New Broad Street, London, E.C. Return made up to Jan. 12; filed Jan. 15, 1897. 2,901 shares taken up, and 2,500 issued as paid. 1*l.* per share called on the rest, and 363*l.* 10*s.* received, leaving 37*l.* 10*s.* in arrears.

London X L Drug Company (Ltd.).—Regd. July 20, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 59 St. James's Street, Burnley. The business has been sold to William G. Walker, chemist, of York, for 600*l.* in cash.

Lovett & Bones (Ltd.).—Regd. Aug. 17, 1897.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 23 Broadgate, Coventry. No returns.

Lynch & Co. (Ltd.).—Regd. Aug. 4, 1892.—Cap. 25,000*l.*, in 1*l.* shares. Wholesale chemists and druggists' sundriesmen. Regd. Off., 192 Aldersgate Street, E.C. Return made up to and filed on May 25, 1897. 12,500 shares taken up, 3,500 issued as paid, and 9,000*l.* received.

M

Mabyn & Co. (Ltd.).—Regd. Jan. 1, 1891.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 1 King David Lane, Shadwell, London, E. Return made up to July 1; filed July 3, 1897. All shares taken up, 995 issued as paid, and 5*l.* received.

Mackenzie Drug and Chemical Company (Ltd.).—Regd. Feb. 12, 1895.—Cap. 2,000*l.*, in 10*l.* shares. Regd. Off., 33 Benliah Road East, Thornton Heath, Surrey. Return made up to June 19; filed July 24, 1895. 53 shares taken up, 30 issued as paid, and 230*l.* received.

MacSymon & Co. (Ltd.).—Regd. Jan. 2, 1888.—Cap. 20,000*l.*, in 10*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 4a Deane Street, Liverpool. Resolution passed April 27 and filed May 26, 1896, for voluntary liquidation, and the transfer of its business to "MacSymon's Stores (Ltd.)." (*q.v.*)

MacSymon's Stores (Ltd.).—Regd. April 11, 1896.—Cap. 100,000*l.*, in 5*l.* shares. General merchants (taking over "MacSymon & Co. Ltd.," wholesale and retail chemists and druggists). Regd. Off., 4a Deane Street, Liverpool. Return made up to Sept. 22; filed Sept. 27, 1897. All shares taken up, 10,000 issued as paid, and 50,000*l.* received.

Magor (Ltd.).—Regd. July 20, 1897.—Cap. 60,000*l.*, in 6,000 shares of 5*l.*, and 30,000 shares of 1*l.* each. Chemists, druggists, and drysalers. Regd. Off., 43 Bull Street, Birmingham. No returns.

Mark's Cure Syndicate (Ltd.).—Regd. Oct. 19, 1896.—Cap. 1,000*l.*, in 1*l.* shares. Mfrs. of gout, sciatica, and lumbago cures. Regd. Off., 1 Devonshire Chambers, Bishopsgate Street, London, E. Return made up March 5; filed March 13, 1897. 72 shares taken up, 37*l.* paid, and 35*l.* in arrears.

C. F. Marsden & Co. (Ltd.).—Regd. Oct. 22, 1892.—Cap. 1,000*l.*, in 1*l.* shares. Dispensing chemist and drug merchants. Return made up to Feb. 21; filed Feb. 23, 1895. All shares taken up, and 1,000*l.* paid. Present address not known.

Martin & Co., Chemists (Ltd.).—Regd. Nov. 14, 1895.—Cap. 300*l.*, in 1*l.* shares. Regd. Off., 102 Normanton Road, Derby. Return made up to Dec. 21; filed Dec. 24, 1895. All shares taken up, and 300*l.* paid. At present doing no business.

Marshall's (Ltd.).—Regd. Jan. 12, 1897.—Cap. 25,000*l.*, in 1*l.* shares. Chemists, druggists, and fly-catcher mfrs. Regd. Off., 27 Red Lion Square, London, W.C. No returns.

Marston & Co. (Ltd.).—Regd. March 6, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Chemists, druggists, dentists, &c. Regd. Off., 52 Holdenhurst Road, Bournemouth. Resolution passed March 12, and confirmed March 29, 1897, for voluntary liquidation.

Mason & Co. (Ltd.).—Regd. Aug. 8, 1892.—Cap. 5,000*l.*, in 1*l.* shares. Pat. med. vendors and drug-merchants. Regd. Off., 80 King Street, South Shields. Return made up to Nov. 30; filed Dec. 8, 1896. 4,155 shares taken up, 2,000 issued as paid, and 2,155*l.* received.

Mason & Booth (Ltd.).—Regd. May 1, 1897.—Cap. 2,000*l.*, in 1*l.* shares. Chemists, druggists, and drug-merchants. Regd. Off., 41 Savile Street, York. Return made up to Aug. 27; filed Aug. 28, 1897. 750 shares taken up and issued as paid.

William Mather (Ltd.).—Regd. Jan. 12, 1894.—Cap. 20,000*l.*, in 10*l.* shares. Medical plaster mfrs. and mfg. chemists. Regd. Off., Dyer Street, Hulme, Manchester. Return made up to Aug. 20; filed Aug. 21, 1897. 913 shares taken up, 600 issued as paid, and 3,130*l.* received.

Charles Matthews (Ltd.).—Regd. Sept. 23, 1895.—Cap. 3,000*l.*, in 10*l.* shares. Chemists and druggists. Regd. Off., 63 Market Street, Ashby-de-la-Zouch. Return made up to Feb. 15; filed Feb. 16, 1897. All shares taken up, 295 issued as paid, and 50*l.* received.

J. F. McClune & Co. (Ltd.).—Regd. Sept. 16, 1895.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Medical Hall, Taff Street, Pontypridd. Return made up to Jan. 30; filed Feb. 4, 1896. 600 shares taken up and paid for in full.

May & Baker (Ltd.).—Regd. Dec. 23, 1890.—Cap., in 100*l.* shares (100 Pref.). Mfg. chemists. Regd. Off., Garden Wharf, Church Road, Battersea, S.W. Return made up to May 31; filed June 15, 1897. 75 Pref. and 315 Ord. taken up, 25 Pref. issued as fully paid, 310 Ord. issued with 80*l.* per share considered as paid. 100*l.* per share called on 50 Pref., and 80*l.* per share on 5 Ord., and 5,400*l.* has been paid.

May's Drug Stores (Ltd.).—Regd. Dec. 16, 1893.—Cap. 20,000*l.*, in 1*l.* shares. Regd. Off., 297 Winchester House, E.C. Return made up to April 7; filed April 14, 1897. 9,603 shares taken up, 3 issued as paid, and 9,600*l.* received.

Medico (Ltd.).—Regd. June 3, 1896.—Cap. 15,000*l.*, in 10*l.* shares. Regd. Off., 5 Pump Street, Blackburn. Return made up to July 23; filed Aug. 11, 1897. 1,200 shares taken up, 600 issued as paid, and 6,000*l.* received.

Medico-Hygienic Inventions Company (Ltd.).—Regd. Feb. 13, 1897.—Cap. 17,875*l.*, in 2,500 Ord. of 5*l.*, 1,000 Def. of 5*l.*, and 375 Founders' shares of 1*l.* each. Regd. Off., 63 Queen Victoria Street, London, E.C. Return made up to June 25, 1897, and filed same day. 1,241 Ord. and 320 Founders' shares taken up. 2*l.* 10*s.* per share called on the Ord. and 1*l.* per share on the Founders', and 3,422*l.* 10*s.* paid.

Mellin's Emulsion Company (Ltd.).—Regd. Jan. 7, 1892.—Cap. 55,000*l.*, in 1*l.* shares (increase of 50,000*l.* filed on June 3, 1897). Mfg. chemists, and mfrs. of "Emulsion of Cod-liver Oil." Regd. Off., Marlborough Works, Stafford Street, Peckham, London. Return made up to April 27; filed April 28, 1897. 4,900 shares taken up, and 4,900*l.* received.

Mellin's Food (Ltd.).—Regd. June 16, 1896.—Cap. 250,000*l.*, in 20,000 Pref. shares of 5*l.* and 150,000 Ord. shares of 1*l.* each. Regd. Off., Mellin's Food Works, Stafford Street, Peckham, London, S.E. Return made up to July 8; filed Sept. 14, 1897. All shares taken up, and the Ord. shares issued as paid; 100,000*l.* called and paid on the Pref.

Metropolitan Chemical Syndicate (Ltd.).—Regd. Feb. 20, 1894.—Cap. 1,000*l.*, in 1*l.* shares. Mfg. chemists. Present address not known. Only 7 shares taken up, and nothing called.

Metropolitan Drug Company (Ltd.).—Regd. June 19, 1894.—Cap. 5,000*l.*, in 1*l.* shares. Dissolved Sept. 15, 1896.

Charles Midgley (Ltd.).—Regd. April 25, 1895.—Cap. 2,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., 23 St. Ann's Square, Manchester. Return made up to March 19; filed March 29, 1897. 305 shares taken up, and 1,525*l.* received.

Midland Apothecaries' Company (Ltd.).—Regd. Feb. 25, 1895.—Capital 5,000*l.*, in 1*l.* shares. Regd. Off., 14 Ethel Street, Birmingham. Return made up to July 3; filed July 16, 1897. 1,017 shares taken up, and 881 issued as paid 1*l.* per share called on 136, and 115*l.* received, leaving 21*l.* in arrears.

Midland Chemical Works (Ltd.).—Regd. April 9, 1897.—Cap. 3,000*l.*, in 100 Pref. shares of 10*l.* and 2,000 Ord. shares of 1*l.* each. Regd. Off., Red Hill, Dudley, Worcester. Return made up to Aug. 20; filed Aug. 23, 1897. 1,517 Ord. taken up, 1,500 issued as paid, and 17*l.* received.

Millwall Chemical Company (Ltd.).—Regd. Feb. 1, 1896.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., Leadenhall Buildings, Leadenhall Street, E.C. Return made up to April 29; filed April 29, 1897. All shares taken up, and 1,000*l.* paid.

Molineux (Ltd.).—Regd. Sept. 28, 1895.—Cap. 1,000*l.*, in 1*l.* shares. Chemists, druggists, and grocers. Regd. Off., Stafford Place, St. George's, Wellington, Salop. Return made up to Feb. 15; filed March 1, 1897. 956 shares taken up, and 956*l.* received.

B. F. Moise (Ltd.).—Regd. May 22, 1897.—Cap. 10,000*l.*, in 1*l.* shares. Perfumers, chemists, and druggists. Regd. Off., 9 Butler Street, London, E.C. Return made up to July 23; filed July 23, 1897. 8,007 shares taken up, 6,000 issued as paid, 2,000*l.* received, and 7*l.* in arrears.

Moore's Drug and Herb Company (Ltd.).—Regd. Nov. 24, 1894.—Cap. 100*l.*, in 1*l.* shares. Regd. Off., 26 Gillington Road, Bradford. Return made up to Feb. 22; filed Feb. 26, 1897. All shares taken up, and 100*l.* received.

Morris's Drug Stores (Ltd.).—Regd. April 24, 1891.—Capital 1,000*l.*, in 1*l.* shares. Regd. Off., 2 Park Road, Liverpool. Return made up to Feb. 8, 1896; filed Jan. 5, 1897. 805 shares taken up, and 370 issued as paid. 10*s.* per share called on remainder, and 315*l.* received, including calls paid in advance.

Morris & Co. (Ltd.).—Regd. Sept. 27, 1887.—Cap. 1,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., King Street, Wimborne, Dorset. Return made up to Nov. 29, 1894; filed Sept. 26, 1895. 80 shares taken up, and 400*l.* received.

Morris Little & Son (Ltd.).—Regd. Nov. 18, 1895.—Cap. 100,000*l.*, in 1*l.* shares. Chemists, druggists, and soap-boilers. Regd. Off., 13 Priory Street, Doncaster, Yorks. Return made up to May 18; filed May 19, 1897. All shares taken up, and all issued as paid.

Mortimers' Syndicate (Ltd.).—Regd. Nov. 30, 1892.—Cap. 5,000*l.*, in 5*l.* shares. Regd. Off., Park Chambers, Westgate Street, Cardiff. The business has been transferred to the General Remedies Company (Ltd.).

N

National Drug Company (Ltd.).—Regd. Sept. 13, 1893.—Cap. 15,000*l.*, in 1*l.* shares. Dissolved Sept. 15, 1896.

National Drug Company (Ltd.).—Regd. July 13, 1897.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 30 Londesborough Street, Kingston-upon-Hull. No returns.

Needhams (Ltd.).—Regd. March 20, 1897.—Cap. 30,000*l.*, in 1*l.* shares. Pat. med. mfrs. and drug-merchants. Regd. Off., Buxton Road, Huddersfield. Return made up to July 28; filed Oct. 2, 1897. 5,007 shares taken up, and 5,007*l.* paid.

Newhams (Ltd.).—Regd. Oct. 24, 1893.—Cap. 1,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., 27 King Street, Sheffield. Return made up to Feb. 15; filed Feb. 12, 1897. 97 shares taken up, and 485*l.* paid.

Newman's Drug Stores (Ltd.).—Regd. Feb. 2, 1897.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 50 Barking Road, Canning Town, London, E. Return made up to Feb. 25; filed March 3, 1897. 520 shares taken up, 500 issued as paid, and 20*l.* received. Richard S. Newman, med. vendor, holds 501 shares.

New Reichenhall Company (Ltd.).—Regd. July 7, 1897.—Cap. 33,000*l.*, in 1*l.* shares. Chemists, druggists, and vendors of "Joseph Mack's Austrian Pine Products." Regd. Off., 23 College Hill, London, E.C. The subscribers have signed a request for the striking-off of the company's name from the register.

Nichols Chemical Company (Ltd.).—Regd. May 13, 1896.—Cap. 6,000*l.*, in 5*l.* shares. Regd. Off., Lancashire Brick Company's Siding, Baxenden, Lancs. Return made up to June 11; filed June 9, 1897. All shares taken up, 870 issued as paid, and 1,650*l.* received.

W. D. North (Ltd.).—Regd. March 14, 1890.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 97 City Road, London, E.C. Return made up to Sept. 29; filed Oct. 2, 1896. 1,332 shares taken up, and 550 issued as paid. Full amount called on 350, and 15*s.* per share on 482, and 659*l.* received, leaving 2*l.* 10*s.* in arrears.

North Heigham Drug Company (Ltd.).—Regd. April 17, 1889.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 59 Dereham Road, Heigham, Norwich. Return made up to Feb. 16; filed Feb. 17, 1897. 806 shares taken up, 400 issued as paid, and 406*l.* received.

North Western Drug Stores (Ltd.).—Regd. Feb. 1, 1893.—Cap. 2,000*l.*, in 5*l.* shares. Regd. Off., 212 Duke Street, Barrow-in-Furness. Return made up to Sept. 13; filed Sept. 14, 1897. 126 shares taken up, and 630*l.* received.

Nortons' (Ltd.).—Regd. March 12, 1894.—Cap. 15,000*l.*, in 10*l.* shares. Med. and drug mfrs. Regd. Off., 21 Spital Square, Norton Folgate, London, E. Return made up to Feb. 10; filed Feb. 11, 1897. 1,000 shares taken up, 400 issued as paid, and 6,000*l.* received.

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Oates & Co. (Ltd.).—Regd. April 20, 1893.—Cap. 5,000*l.*, in 1*l.* shares. Mfrs. of druggists' sundries. Present address not known. Return made up to April 16; filed April 19, 1894. 2,205 shares taken up, 1,905 issued as paid, and 300*l.* received.

Omogo (Ltd.).—Regd. Sept. 23, 1896.—Cap. 10,000*l.*, in 1*l.* shares. Pat. med. mfrs., chemists, and druggists. Regd. Off., 42 Side, Newcastle-on-Tyne. Return made up to Dec. 22; filed Dec. 23, 1896. 2,800 shares taken up, and 1,400 issued as paid. 6*s.* per share called on 1,400, and 420*l.* received.

Oppenheimer, Son & Co. (Ltd.).—Regd. Jan. 1, 1891.—Cap. 50,000*l.*, in 10*l.* shares (1,200 Pref.). Mfg. chemists and wholesale druggists. Regd. Off., 14 Worship Street, Finsbury, E.C. Return made up to Nov. 14; filed Dec. 28, 1896. 1,200 Pref. and 2,857 Ord. shares taken up, and 1,200 Pref. and 3,800 Ord. issued as paid. 10*l.* per share called on 47 Ord., 470*l.* received, and 100*l.* in arrears.

Orridge's Surrey Drug Company (Ltd.).—Regd. Feb. 23, 1891.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 149 High Street, Guildford. Return made up to Feb. 15; filed Feb. 23, 1897. 390 shares taken up, and 300*l.* received.

Ostler & Co. (Ltd.).—Regd. Sept. 20, 1894.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 2 Star Hill, Rochester. Return made up to Feb. 2; filed Feb. 5, 1897. All shares taken up, and 1,000*l.* received.

Oxen & Co. (Ltd.).—Regd. Aug. 20, 1890, as the "Central Drug Company (Ltd.)."—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 40 Bridge Street, Newcastle, Staffs. Return made up to July 31; filed Aug. 24, 1896. 1,621 shares taken up, and 1,621*l.* received.

Oxford Drug Company (Ltd.).—Regd. June 25, 1890.—Cap. 2,000*l.*, in 10*l.* shares. Regd. Off., Broad Street, Oxford. Return made up to June 30; filed July 1, 1897. 170 shares taken up, 5*l.* per share considered as paid on 150. 5*l.* per share called on 20, and 100*l.* received.

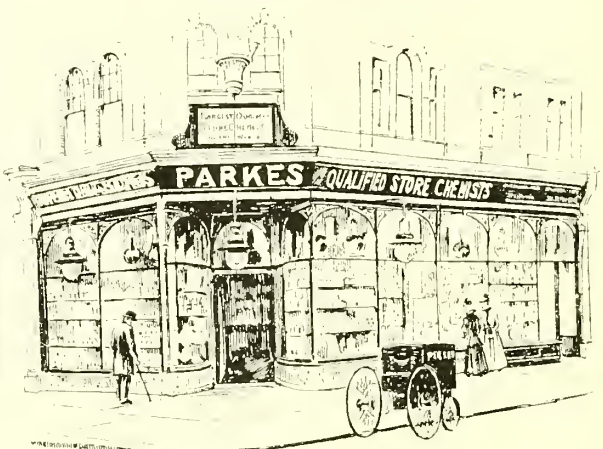
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Parker Remedies Company (Ltd.).—Regd. March 13, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Chemists, druggists, and pat. med. mfrs. Regd. Off., Shannon Court, Bristol. Return made up to Dec. 31, 1895; filed April 16, 1896. 603 shares taken up, and 603*l.* received.

Parke's Drug Stores (Ltd.).—Regd. June 20, 1894.—Cap. 100,000*l.*, in 8,000 Pref. shares of 5*l.* each, and 57,000 Ord. and 3,000 Ord. Def. shares of 1*l.* each. Regd. Off., 151 High Street, Kensington, London, W. Return made up to Oct. 20; filed



PARKE'S ORIGINAL STORE AT BRIXTON.



PARKE'S, FULHAM ROAD.

Oct. 26, 1896. 3,341 Pref., 21,524 Ord., and 3,000 Ord. Def. shares taken up. 12,000 Ord. and all the Ord. Def. issued as paid. Full amount called on 2,504 Pref. and 4,213 Ord., 2*l.* 10*s.* per share on 837 Pref., and 10*s.* per share on 5,311 Ord., resulting in the total receipt of 21,481*l.*

Pasteur Anthrax Vaccine Laboratory Company of Australasia (Ltd.).—Regd. July 4, 1896.—Cap. 20,000*l.*, in 1*l.* shares. Regd. Off., 102 Fore Street, London, E.C. Return made up to Nov. 17; filed Nov. 20, 1896. 7 shares taken up, and 7*l.* paid.

Pearson & Barton (Ltd.).—Regd. March 31, 1894.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Brook Street, Chester. Return made up to July 24; filed July 6, 1897. 888 shares taken up, and 888*l.* received.

Pectakos Company (Ltd.).—Regd. Nov. 12, 1895.—Cap. 10,000*l.*, in 1*l.* shares. Chemists, druggists, and pat. med. vendors. Regd. Off., 17 Albion Street, Hanley, Staffs. Return made up to Dec. 19, 1896; filed Jan. 22, 1897. 17,100 shares taken up, 10*s.* per share called on 1,000, and 1*l.* per share on 100, and 600*l.* paid.

People's Remedies Company (Ltd.).—Regd. Oct. 12, 1892.—Cap. 5,000*l.*, in 1*l.* shares. Chemists, druggists, and pat. med. mfrs. and vendors. Regd. Off., 65 Arch, Putney Bridge Station, Fulham, London, S.W. Return made up to and filed on May 20, 1897. 1,590 shares taken up, 1*l.* per share called on 229 and 17*s.* per share on 1,361. 1,375*l.* 16*s.* received, and 10*l.* 1*s.* in arrears.

John Pepper & Co. (Ltd.).—Regd. March 26, 1891.—Cap. 30,000*l.*, in 100*l.* shares. Wholesale and mfg. chemists. Regd. Off., Bedford Laboratory, Bayley Street, Tottenham Court Road, London, W.C. Return made up to March 16; filed March 25, 1897. 275 shares taken up, and all issued as fully paid.

Peptenzyne Company (Ltd.).—Regd. June 24, 1897.—Cap. 100*l.*, in 1*l.* shares. Mfrs. and vendors of drugs and chemical preparations. No off. or returns filed.

Thomas Read Philp & Co. (Ltd.).—Regd. Aug. 1, 1895.—Cap. 500*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Molesworth Street, Wadebridge, Cornwall. Return made up to Dec. 31, 1896; filed Sept. 28, 1897. 500 shares taken up, and 500*l.* received.

H. D. Pochin & Co. (Ltd.).—Regd. Jan. 19, 1897.—Cap. 51,000*l.*, in 10*l.* shares. Mfg. chemists and druggists. Regd. Off., Quay Street, Salford, Manchester. Return made up to April 27; filed May 5, 1897. All shares taken up and issued as paid.

Pioneer Syndicate (Ltd.).—Regd. June 10, 1895.—Cap. 4,000*l.*, in 1*l.* shares. Regd. Off., 98 High Holborn, London, W.C. Return made up to Jan. 14; filed Jan. 25, 1897. 3,457 shares taken up, 3,450 issued as paid, and 7*l.* received.

W. S. Potter (Ltd.).—Regd. Oct. 29, 1892.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., High Street (corner of Richmond Street), Plaistow, London, E. Return made up to Dec. 19; filed Dec. 21, 1896. 1,000 shares taken up, 885 issued as paid, and 115*l.* received.

Thomas Powell (Ltd.).—Regd. Oct. 9, 1886.—Cap. 50,000*l.*, in 10*l.* shares. Pat. med. mfrs., chemists, and druggists. Regd. Off., 1 Albion Place, Blackfriars Bridge, London, S.E. Return made up to and filed on Aug. 10, 1897. 4,901 shares taken up, 4,894 issued as paid, and 70*l.* received.

Powell & Barstow (Ltd.).—Regd. Jan. 19, 1897.—Cap. 11,000*l.*, in 5*l.* shares. Surgical-instrument and elastic-hosiery mfrs. and druggists' sundriesmen. Regd. Off., 58 Blackfriars Road, London, S.E. Return made up to June 11; filed June 15, 1897. 505 shares taken up, 500 issued as paid, and no calls made on the others.

Preston Drug and Stores Company (Ltd.).—Regd. Oct. 28, 1893.—Cap. 10,000*l.*, in 2*l.* shares. Dissolved Sept. 15, 1896.

W. Price & Co. (Ltd.).—Regd. April 19, 1893.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 19 High Street, Bülth, co. Brecon. Return made up to April 10; filed April 13, 1897. 707 shares taken up, 700 issued as paid, and 7*l.* received.

Price & Burnett (Ltd.).—Regd. Sept. 3, 1895.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 11 Witham, Hull. Return made up to Oct. 19; filed Oct. 20, 1896. 893 shares taken up, 630 issued as paid, and 263*l.* received.

Pritchards (Ltd.).—Regd. Aug. 10, 1895.—Cap. 5,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 71 and 73 High Street, Cheshire. Return made up to May 6; filed May 8, 1897. 2,686 shares taken up, 2,523 issued as paid, and 163*l.* received.

Provincial Co-operative Drug Company (Ltd.).—Regd. July 31, 1889.—Cap. 600*l.*, in 1*l.* shares. Regd. Off., 1 Providence Street, Ipswich. Return made up to Feb. 15; filed Feb. 23, 1897. 597 shares taken up, 590 issued as paid, and 7*l.* received.

Pure (Homœopathic) Drug Association (Ltd.).—Regd. Nov. 13, 1895.—Cap. 5,000*l.*, in 1*l.* shares. Regd. Off., 14 Arcade Chambers, St. Mary's Gate, Manchester. Return made up to Dec. 11; filed Dec. 31, 1895. 7 shares taken up, 10*l.* per share called, 3*l.* paid, and 10*l.* in arrears.

Q

Quaet Syndicate (Ltd.).—Regd. June 3, 1897.—Cap. 3,750*l.*, in 50*l.* shares. Nitrate mfrs., miners, chemists, and druggists. Regd. Off., 36 Lime Street, London, E.C. Return made up to July 28; filed Aug. 31, 1897. All shares taken up, 25 issued as paid, and 2,500*l.* received.

R

Rawden & Co. (Ltd.).—Regd. May 12, 1897.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Larkfield Mills, Rawdon, Yorks. Return made up to June 10; filed June 17, 1897. All shares taken up, 1*l.* per share called on 500 and 1*l.* per share on the others, and 525*l.* received.

E. A. Rawding (Ltd.).—Regd. Dec. 3, 1896.—Cap. 10,000*l.*, in 5*l.* shares. Wholesale confectioners, chemists, and druggists. Regd. Off., 29 Grove Street, Retford. Return made up to April 14; filed April 15, 1897. 900 shares taken up, 400 issued as paid, and 2,500*l.* received.

J. H. Read (Ltd.).—Regd. July 12, 1894.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 90 Victoria Street, Westminster, London, S.W. Return made up to Feb. 26; filed March 6, 1897. 407 shares taken up, and 401*l.* received, leaving 6*l.* in arrears.

Arthur Henry Reckless & Co. (Ltd.).—Regd. Sept. 22, 1897.—Cap. 200*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., Church Street, Ashbourne, Derbyshire. No returns.

Reichenhall Syndicate (Ltd.).—Regd. July 31, 1895.—Cap. 1,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 60 Queen Victoria Street, London, E.C. Return made up to Jan. 14; filed March 24, 1897. All shares taken up, 498 issued as paid, and 502*l.* received.

G. F. Restall & Co. (Ltd.).—Regd. April 27, 1887, as "The Highgate Drug Company (Ltd.)." Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 19 Moseley Road, Birmingham. Return made up to July 21; filed July 27, 1896. 904 shares taken up, and 904*l.* received.

Richards & Ward (Ltd.).—Regd. Oct. 30, 1890.—Cap. 20,000*l.*, in 10*l.* shares. Importers of American remedies. Regd. Off., 46 Holborn Viaduct, London, E.C. Return made up to Feb. 16; filed April 27, 1897. All shares taken up, and 19,900*l.* considered as paid on them. 5*l.* per share called on 20, and 100*l.* received.

John Richardson & Co., Leicester (Ltd.).—Regd. Dec. 30, 1891.—Cap. 100,000*l.*, in 10*l.* shares. Mfg., wholesale, and retail chemists and druggists. Regd. Off., 10 Friar Lane, Leicester. Return made up to Sept. 22; filed Nov. 6, 1896. 5,006 shares taken up and 3,000 issued as fully paid, while 2,000 have been issued with 5*l.* per share considered as paid. Full amount called, and 60*l.* paid on the rest.

S. Richardson & Co. (Ltd.).—Regd. Feb. 7, 1887.—Cap. 1,000*l.*, in 2*l.* shares. Chemists and druggists. Regd. Off., Dental Depot, Norton Road, Stockton-on-Tees. Return made up to Dec. 22; filed Dec. 24, 1896. 500 shares taken up, and 10*l.* per share considered as paid on 493 shares. 10*l.* per share called on 7, and 3*l.* 10*l.* received.

John Roberts (Ltd.).—Regd. May 1, 1894.—Cap. 600*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., East Street, Rhayader, Radnorshire. Return made up to May 31; filed June 4, 1897. All shares taken up, and 600*l.* received.

J. R. Robert's Stores (Ltd.).—Regd. July 24, 1894.—Cap. 202,500*l.*, in 1*l.* shares (50,000 6-per-cent. Cum. Pref., 150,000 Ord., and 2,500 Management). General storekeepers and retail chemists and druggists. Regd. Off., 86 The Broadway, Stratford, London, E. Return made up to April 23; filed July 2, 1897. All shares taken up, and 202,500 received.

Mounsey Robinson (Ltd.).—Regd. Aug. 17, 1894.—Cap. 2,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 8 Middle-gate, Penrith, Cumberland. Return made up to Sept. 20; filed Sept. 23, 1897. 400 shares taken up, and 400*l.* received.

Robinson & Sons (Ltd.).—Regd. Oct. 25, 1893.—Cap. 75,000*l.*, in 10*l.* shares (2,500 Pref.) Mfrs. of antiseptic wools and dressings. Regd. Off., Wheatbridge Mills, Furnace Lane, Chesterfield. Return made up to Jan. 5; filed Jan. 8, 1897. All Pref. and 2,504 shares taken up, and 2,500 of each class issued as paid. 40*l.* received.

William Robinson & Co., of Clayton (Ltd.).—Regd. Aug. 27, 1897.—Cap. 15,000*l.*, in 10*l.* shares. Mfg. chemists. Regd. Off., Hope Chemical Works, Crabtree Lane, Clayton, Manchester. No returns.

Dr. Charles Rooke (Ltd.).—Regd. Nov. 18, 1892.—Cap. 25,000*l.*, in 10*l.* shares (1,000 Pref.). Chemists and Druggists. Regd. Off., 18 Guildford Street, Leeds. Return made up to Dec. 24; filed Dec. 31, 1896. 441 Pref. and 827 Ord. shares taken up, and 400 Pref. and 700 Ord. issued as paid; 10*l.* called on the others, and 1,680*l.* received.

Routly's Indian Drug Company (Ltd.).—Regd. May 20, 1895.—Cap. 20,000*l.*, in 1*l.* shares. Mfrs. of "Routly's Indian Liver-pills" and other meds. Present address not known.

Royd (Ltd.).—Regd. May 21, 1897.—Cap. 2,000*l.*, in 1*l.* shares. Chemist and druggists. No Off. or returns filed.

Ruddolph Drug Company (Ltd.).—Regd. Jan. 20, 1896.—Cap. 5,000*l.*, in 10*l.* shares. Regd. Off., 2 Forbury, Reading. Return made up to June 8; filed July 9, 1897. 298 shares taken up, and 2,980*l.* paid.

Ruddolph Laboratory Company (Ltd.).—Regd. May 4, 1893.—Cap. 10,000*l.*, in 10*l.* shares. Drug and chemical mfrs., chemists and druggists. Regd. Off., 29 London Road, Reading. Mr. Blake P. Alnatt has been appointed receiver and manager on behalf of the debenture-holders.

Anna Ruppert (Ltd.).—Regd. Dec. 1, 1893.—Cap. 50,000*l.*, in 1*l.* shares. Chemists, druggists, and drysalters. 7 shares only taken up. Present address not known.

S

Safe Domestic Remedies Company (Ltd.).—Regd. Dec. 19, 1896.—Cap. 2,000*l.*, in 1*l.* shares. Regd. Off., 27 Jewry Street, London, E.C. Return made up to March 3; filed March 10, 1897. 730 shares taken up, 600 issued as paid, and 130*l.* received.

Sala's Chemists' Supply (Ltd.). Regd. March 7, 1889.—Cap. 5,000*l.*, in 1*l.* shares. Present address not known. Return made up to May 14; filed May 21, 1895. 1,757 shares taken up, 1,500 issued as paid, and 257*l.* paid.

Salt Regal (Ltd.).—Regd. April 7, 1894.—Cap. 20,000*l.*, in 10*l.* shares. "Salt Regal" mfrs., chemists, druggists, &c. Regd. Off., 9 Bold Place, Liverpool. Return made up to Jan. 8; filed Jan. 13, 1897. 500 shares taken up, 5*l.* per share called, 1,495*l.* received, and 5*l.* in arrears.

Sanitas Company (Ltd.).—Regd. Feb. 6, 1878.—Cap. 60,000*l.*, in 1*l.* shares. Disinfectant and chemical mfrs. Regd. Off., 2 Letchford Buildings, Three Colt Lane, Bethnal Green, London, E. Return made up to March 10; filed March 16, 1897. All shares taken up. 1*l.* per share called on 50,000, and 10*s.* per share on 10,000, and 55,000*l.* paid.

Scott & Bowne (Ltd.).—Regd. Nov. 28, 1888.—Cap. 100,000*l.*, in 10*l.* shares. Pat. med. mfrs. and wholesale chemists. Regd. Off., 95, 96, 97, and 98 Great Saffron Hill, London, E.C. Return made up to Aug. 2; filed Aug. 3, 1897. 9,507 shares taken up and 7,750 issued as paid; full amount called on others, and 17,570*l.* received, leaving 10*l.* in arrears. One share has been forfeited.

Scott Drug Company (Ltd.).—Regd. Sept. 29, 1890.—Cap. 100*l.*, in 1*l.* shares. Regd. Off., 84 Park Street, Camden Town, London, N.W. Return made up to Jan. 25; filed Feb. 18, 1897. All shares taken up, and 100*l.* received.

Sequah Medicine Company (Ltd.).—Regd. Oct. 28, 1895.—Cap. 7,000*l.*, in 1*l.* shares. Regd. Off., 44 Farringdon Street, London, E.C. Return made up to Nov. 4; filed Nov. 3, 1896. 5,500 shares taken up, and 5,500*l.* received.

Shadford & Co. (Ltd.).—Regd. Dec. 9, 1890.—Cap. 1,525*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., 21 Market Place, Spalding. Return made up to March 18; filed June 10, 1897. All shares taken up, and 1,525*l.* received.

Shirleywich Salt and Chemical Works (Ltd.).—Regd. Sept. 27, 1895, as "The New Chemical Works (Ltd.)."—Cap. 3,150*l.*, in 2,000 "A" shares of 1*l.*, and 23,000 "B" shares of 1*s.* each. Regd. Off., 9 Austin Friars, London, E.C. Return made up to June 28; filed July 1, 1897. All the "A" and 20,700 "B" shares taken up, and 20,000 "B" shares issued as paid. Full amount called on the others, and 2,027*l.* 10*s.* paid, leaving 7*l.* 10*s.* in arrears. Name changed Nov. 27, 1895.

Shuker & Stephens (Ltd.).—Regd. June 29, 1896.—Cap. 4,000*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., Ridgway, Plympton, Devon. Return made up to July 14; filed July 20, 1897. 2,400 shares taken up, 15*s.* per share called, and 1,800*l.* received. Charles B. Shuker, chemist, holds 1,200 shares.

W. E. Shuttlewood (Ltd.).—Regd. Sept. 5, 1893.—Cap. 1,000*l.* in 1*l.* shares. Chemists and druggists. Regd. Off., Malpas, Cheshire. Return made up to Nov. 14; filed Dec. 3, 1896. 156 shares taken up, and 156*l.* paid.

J. Slim & Co. (Ltd.).—Regd. May 16, 1896.—Cap. 500*l.*, in 1*l.* shares. Chemists and druggists. Regd. Off., 176 Holyhead Road, Wednesbury, Staffs. Return made up to Feb. 15; filed Feb. 20, 1897. 307 shares taken up, 300 issued as paid, and 7*l.* received.

Mark Smith (Ltd.).—Regd. June 9, 1893.—Cap. 6,000*l.*, in 1*l.* shares. Mfg. chemists. Regd. Off., Riverhead Road, Louth, Lincs. Return made up to Jan. 15; filed Jan. 16, 1897. 4,000 shares taken up, and all issued as paid.

Stephen Smith & Co. (Ltd.).—Regd. June 4, 1897.—Cap. 100,000*l.*, in 1*l.* shares. Wholesale pharmaceutical wine merchants, druggists, &c. Regd. Off., 45 and 46 Broad Street Avenue, London, E.C. No returns filed.

Sydney Smith & Sons (Ltd.).—Regd. Oct. 17, 1893.—Cap. 5,000*l.*, in 100*l.* shares. Grocers, chemists, and druggists. Regd. Off., 26 Kirkdale, Sydenham, London, S.E. Return made up to July 14; filed Sept. 14, 1897. 49 shares taken up, and 4,900*l.* paid.

Somerset Drug Company (Ltd.).—Regd. Dec. 1, 1893.—Cap. 2,000*l.*, in 5*l.* shares. Regd. Off., 3 and 4 Market Place, Highbridge, Somerset. Final meeting held Jan. 4, 1897.

Sokol Sanitation Company (Ltd.).—Regd. Jan. 21, 1896. Cap. 10,000*l.*, in 1*l.* shares. Pat. med. mfrs. and mfg. chemists. Regd. Off., 58 Three Mills Lane, Bromley-by-Bow, London, E. Return made up to Dec. 25; filed Dec. 31, 1896. 4,707 shares taken up, and 3,900 issued as paid. 1*l.* per share called on 7, and 5*s.* per share on 800, and 207*l.* received.

G. & G. Stern (Ltd.).—Regd. Nov. 27, 1895.—Cap. 10,000*l.*, in 1*l.* shares. Mfrs. of pharmaceutical preparations. Regd. Off., 62 Gray's Inn Road, London, W.C. Return made up to April 3; filed April 9, 1896. All shares taken up, 9,993 issued as paid, and 7*l.* received. Samuel Berghem, mfg. chemist, of office, holds 9,993 shares.

T. Stothert & Co. (Ltd.).—Regd. Jan. 10, 1893.—Cap. 4,000*l.*, in 100*l.* shares. Wholesale druggists and drysalters. Regd. Off., 37 Railway Road, Blackburn. Return made up to April 24; filed May 12, 1896. 20 shares taken up, and 2,000*l.* received.

W. H. Stunt (Ltd.).—Regd. March 6, 1893.—Cap. 12,500*l.*, in 5*l.* shares. Mfg. druggists and druggists' sundriesmen. Regd. Off., 45 Tabernacle Street, London, E.C. Dissolved Sept. 15, 1896.

Symes & Co. (Ltd.).—Regd. Jan. 1, 1894.—Cap. 10,000*l.*, in 5*l.* shares. Chemists and druggists. Regd. Off., 14 Hardman Street, Liverpool. Return made up to July 13; filed July 27, 1897. 1,440 shares taken up, and 7,200*l.* received.

Supply Stores Association (Ltd.).—Regd. May 2, 1883.—Cap. 1,000*l.*, in 1*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 218 Market Place, Dudley. Return made up to Oct. 16; filed Oct. 27, 1896. All shares taken up, 600 issued as paid, and 400*l.* received.

Surgical Supply Association (Ltd.).—Regd. Sept. 18, 1897.—Cap. 5,000*l.*, in 1*l.* shares. Surgical-instrument makers, chemists, and druggists. Regd. Off., 35 Market Street, Manchester. No returns.

Sussex Co-operative Drug Company (Ltd.).—Regd. Jan. 6, 1883.—Cap. 50,000*l.*, in 100*l.* shares. Regd. Off., 135 Queen's Road, Brighton. Return made up to June 3; filed June 12, 1897. 148 shares taken up, and 14,800*l.* paid.

F. W. Sutcliffe & Co. (Ltd.).—Regd. Feb. 7, 1887.—Cap. 2,000*l.*, in 5*l.* shares. Wholesale druggists and pat. med. vendors. Regd. Off., 248 Rochdale Road, Oldham. Return made up to Jan. 30; filed Feb. 1, 1897. 8 shares taken up, and 40*l.* paid.

T

"Tacquaru" Company (Ltd.).—Regd. March 11, 1897.—Cap. 15,000*l.*, in 1*l.* shares. Pat. med. mfrs., chemists, and druggists. Regd. Off. not filed. Return made up to Aug. 3; filed Sept. 17, 1897. 7 shares taken up, but no calls made.

Talbot Herbal Remedies Company (Ltd.).—Regd. July 6, 1896.—Cap. 1,000*l.*, in 1*l.* shares. Regd. Off., 22 Worngate, Boston, Lincs. Return made up to Feb. 15; filed Feb. 19, 1897. 946 shares taken up, 800 issued as paid, and 146*l.* received. Charles H. Talbot, herbalist (managing director), holds 801 shares.

H. Taylor & Co. (Ltd.).—Regd. June 9, 1897.—Cap. 200*l.*, in 1*l.* shares. Mfg. chemists. Regd. Off., 39 Gordon Street, Lower Broughton, Salford, Lanes. No returns.

Joseph Taylor & Co. (Ltd.).—Regd. Nov. 14, 1896.—Cap. 45,000*l.*, in 5*l.* shares. Drysalters, chemists, and druggists. Regd. Off., Mill Street, Radcliffe, Lanes. Return made up to Sept. 13; filed Sept. 20, 1897. 8,947 shares taken up, and 44,735*l.* paid.

Taylor's Drug Company (Ltd.).—Regd. April 16, 1888.—Cap. 30,000*l.*, in 1*l.* shares. Regd. Off., 18 Guildford Street, Leeds. Return made up to Nov. 2; filed Nov. 11, 1896. All shares taken up, 7,000 issued as paid, and 23,000*l.* received.

Terröl Company (Ltd.).—Regd. April 11, 1896.—Cap. 20,000*l.*, in 1*l.* shares. Pat. med. mfrs. Regd. Off., 6 Dowgate Hill, Cannon Street, London, E.C. Return made up to Aug. 24; filed Aug. 29, 1897. 10,243 shares taken up, and 10,000 issued as paid. 10*s.* per share called on 243, and 76*l.* 10*s.* received, leaving 45*l.* in arrears. Albert E. Bertie-Smith, wholesale chemist, holds 3,665 shares.

John Thompson (Ltd.).—Regd. Aug. 10, 1892.—Cap. 25,000*l.*, in 5*l.* shares. Wholesale and retail chemists and druggists. Regd. Off., 58 Hanover Street, Liverpool. Return made up to Aug. 28; filed Sept. 4, 1897. 2,807 shares taken up, 2,800 issued as paid, and 35*l.* received.

J. & J. Thompson & Co. (Ltd.).—Regd. Dec. 29, 1886.—Cap. 2,000*l.*, in 5*l.* shares. Pat. med. vendors and druggists. Regd. Off., 192 Manchester Road, Oldham. Return made up to May 17; filed May 25, 1897. 357 shares taken up, 5*l.* called on 300 and 4*l.* on 57, 1,707*l.* paid, and 2*l.* in arrears.

- Samuel Thornley (Ltd.).**—Regd. Aug. 27, 1894.—Cap. 10,000*l.* in 5*l.* shares. Chemists and druggists. Regd. Off., 6 Snow Hill, Birmingham. Return made up to June 12; filed July 2, 1896. 745 shares taken up, 400 issued as paid, and 1,725*l.* received.
- Dr. Tibble's Vi-Cocoa (Ltd.).**—Regd. Dec. 6, 1895.—Cap. 50,000*l.* in 1*l.* shares. Regd. Off., Bunhill Row, London, E.C. Return made up to March 15; filed March 17, 1897. 10,000 shares taken up, and 10,000*l.* paid.
- Tidman & Son (Ltd.).**—Regd. July 3, 1894.—Cap. 20,000*l.* in 1,000 Pref., 600 Ord., and 400 Def. shares of 10*l.* each. Soap mfrs. and mfg. chemists. Regd. Off., 4, 5, and 6 Bushell Street, Wapping, London, E. Return made up to Dec. 5; filed Dec. 21, 1896. All Pref., all Def., and 597 Ord. taken up; all Pref., all Def., and 240 Ord. issued as paid. Full amount called, and 3,570*l.* paid on 357 Ord.
- J. D. Treharne & Son (Ltd.).**—Regd. June 12, 1890, as "The Chemists' Supply (Ltd.)."—Cap. 10,000*l.* in 5*l.* shares. Chemists and Druggists. Regd. Off., 104 Bute Docks, Cardiff. Name changed Aug. 10, 1892. Return made up to March 10; filed March 13, 1897. 1,000 shares taken up, 4*l.* per share called, and 4,000*l.* paid.
- Trust Agency and Guarantee Company of England (Ltd.).**—Regd. Nov. 17, 1894.—Cap. 10,000*l.* in 10*l.* shares. Promoters of the "Chemists' Co-operative Society (Ltd.)." Present address not known. No returns.
- L. B. Tyson & Co. (Ltd.).**—Regd. Oct. 25, 1893.—Cap. 100,000*l.* in 10*l.* shares. Drug and medicine mfrs., chemists, druggists, &c. Regd. Off., 249½ High Holborn, London, W.C. Return made to Jan. 14; filed Jan. 16, 1897. 1,052 shares taken up, 1,000 issued as paid, and no calls made on the others.
- U**
- United British Castor Oil Company (Ltd.).**—Regd. Nov. 14, 1896.—Cap. 36,000*l.* in 10*l.* shares. Regd. Off., 80 Ossory Road, London, S.E. Return made up to March 19; filed March 26, 1897. All shares taken up, 1,200 issued as paid, and 24,000*l.* received.
- Universal Medicine Company (Ltd.).**—Regd. Oct. 8, 1896.—Cap. 60,000*l.* in 5*l.* shares. Regd. Off., 62 South Castle Street, Liverpool. Return made up to Feb. 11; filed Feb. 18, 1897. 6,602 shares taken up, and 6,050 issued as paid. 5*l.* per share called on 552, and 2,760*l.* received.
- V**
- Vaccination Virus Vanquisher Company (Ltd.).**—Regd. Oct. 29, 1895.—Cap. 20,000*l.* in 1*l.* shares. Pat. med. mfrs. and mfg. chemists. Regd. Off., 31 Snow Hill, London, E.C. Final meeting in connection with liquidation held March 29, 1897.
- Vin Vitae Company (Ltd.).**—Regd. Nov. 13, 1896.—Cap. 6,000*l.* in 1*l.* shares. Pat. med. mfrs. Regd. Off., 5 Bethesda Street, Burnley. Return made up to March 23; filed March 25, 1897. 5,184 shares taken up, and 2,500 issued as paid. 10*l.* per share called on 2,684, and 1,342*l.* received. John A. Heaton, chemist, holds 1,715 shares.
- W**
- J. L. Wade & Co. (Ltd.).**—Regd. Jan. 31, 1888.—Cap. 10,000*l.* in 1*l.* shares. Mfg. chemists and drysalers. Regd. Off., Victoria Works, Manor House Wharf, Nine Elms Lane, London, S.W. Return made up to March 14; filed March 15, 1897. 5165 shares taken up, and 5,000 issued as paid; 165*l.* paid on the rest.
- Waller & Riley (Ltd.).**—Regd. Aug. 13, 1891.—Cap. 2,000*l.* in 1*l.* shares. Chemists and druggists. Regd. Off., 19 Bradshawgate, Bolton. Return made up to May 14; filed May 25, 1897. 706 shares taken up, and 706*l.* received.
- Walton Drug Company (Ltd.).**—Regd. July 11, 1896.—Cap. 500*l.* in 1*l.* shares. Regd. Off., 137 County Road, Liverpool. Return made up to Nov. 16; filed Nov. 16, 1896. 257 shares taken up, and 257*l.* received. Resolution for voluntary liquidation passed Dec. 17, 1896, and confirmed Jan. 7, 1897.
- H. H. Warner & Co. (Ltd.).**—Regd. Nov. 19, 1889.—Cap. 550,000*l.* in 10*l.* shares (35,000 Pref.) Pat. med. and drug mfrs. and wholesale chemists. Regd. Off., 86 Clerkenwell Road, London, E.C. Return made up to Dec. 7; filed Dec. 9, 1896. All shares taken up, and 11,666 Ord. and 6,666 Pref. issued as paid. Full amount called on the others, and 366,680*l.* received.
- B. Waterhouse (Ltd.).**—Regd. April 17, 1896.—Cap. 2,000*l.* in 5*l.* shares. Wholesale druggists. Regd. Off., 30 South Street, Moor, Sheffield. Return made up to June 30; filed July 3, 1897. 320 shares taken up, and 1,600*l.* paid.
- Waterloo Medical Drug Company (Ltd.).**—Regd. Dec. 29, 1893.—Cap. 200*l.* in 10*l.* shares. Regd. Off., 127½ Waterloo Road, London, S.E. Return made up to April 26; filed June 17, 1897. 266 shares taken up, and 133*l.* paid.
- Wednesfield Chemical Syndicate (Ltd.).**—Regd. July 26, 1807.—Cap. 25,000*l.* in 1*l.* shares. Regd. Off., Well Lane, Wednesfield, Staffs. No returns.
- Wendler Brothers (Ltd.).**—Regd. Aug. 14, 1897.—Cap. 12,000*l.* in 10*l.* shares. Mfg. chemists. Regd. Off., 34 Green Lane, Princess Street, Manchester. No returns.
- West Kensington Drug Stores (Ltd.).**—Regd. July 14, 1894.—Cap. 3,500*l.* in 1*l.* shares. Regd. Off., 1 Baron's Court Road, West Kensington, W. Resolution passed on May 28, and confirmed on June 15, 1897, for voluntary liquidation, with a view to reconstruction.
- Westlake (Ltd.).**—Regd. Aug. 31, 1893.—Cap. 2,000*l.* in 1*l.* shares. Chemists and druggists. Regd. Off., 134 High Street, Sutton, Surrey. Return made up to Feb. 19; filed April 17, 1897. All shares taken up and issued as fully paid.
- Weston & Co. (Ltd.).**—Regd. April 10, 1895.—Cap. 2,000*l.* in 1*l.* shares. Chemists and druggists. Regd. Off., 46 St. Peter's Street, Derby. Return made up to Aug. 28; filed Sept. 15, 1897. 207 shares taken up, and 207*l.* paid.
- Wheeldons (Ltd.).**—Regd. Jan. 4, 1897.—Cap. 1,000*l.* in 1*l.* shares. Pharmaceutical and dispensing chemists. Regd. Off., 241 Stockport Road, Chorlton-upon-Medlock, Manchester. Return made up to May 17; filed May 21, 1897. 366 shares taken up, 350 issued as paid, and 16*l.* received.
- A. J. White (Ltd.).**—Regd. April 21, 1897.—Capital 1,000,000*l.* in 500,000 Pref. and 500,000 Ord. shares of 1*l.* each. Reconstruction of company of the same name. Mfrs. of "Mother Seigel's Remedies." Regd. Off., 35 Farringdon Road, London, E.C. Return made up to Sept. 3; filed Sept. 10, 1897. All shares taken up, 166,666 of each class issued as paid, and full amount called on the others, 666,580*l.* 10*l.* received, and 85*l.* 10*l.* in arrears.
- Frederick White (Ltd.).**—Regd. July 26, 1893.—Cap. 1,000*l.* in 5*l.* shares. Chemists and druggists. Regd. Off., 157 Commercial Road, London, E. Return made up to July 22; filed July 27, 1897. All shares taken up, and paid for in full.
- E. Wade Wilton & Co. (Ltd.).**—Regd. Sept. 5, 1890.—Cap. 2,000*l.* in 50*l.* shares. Mfg. chemists and drysalers. Regd. Off., 8 and 10 Charles Steet, Bradford. Return made up to Jan. 14; filed Jan. 31, 1897. 35 shares taken up, and 15 issued as paid. 50*l.* per share called on 3 and 25*l.* per share on 17, and 575*l.* paid. The managing director, E. Wade Wilton, has since "bought out the whole of the shareholders."
- Wilkinson & Simpson (Ltd.).**—Regd. Oct. 6, 1897.—Cap. 50,000*l.* in 10*l.* shares. Wholesale druggists and mfg. chemists, of 24, 30, and 32 Newgate Street, Newcastle-on-Tyne. No office or returns filed.
- Williams, Chemists and Druggists (Ltd.).**—Regd. Aug. 23, 1895.—Cap. 3,000*l.* in 5*l.* shares. Regd. Off., 257 Oldham Road, Manchester. Return made up to and filed on Sept. 18, 1896. 308 shares taken up, 300 issued as paid, and 40*l.* received.
- Williams' Drug Stores (Ltd.).**—Regd. March 24, 1897.—Cap. 500*l.* in 1*l.* shares. Regd. Off., 43 Norland Road, Notting Hill, London, W. Return made up to and filed on July 31, 1897. All shares taken up, and 500*l.* paid. James Williams, chemist, holds 494 shares.
- Williams & Co., Prescott (Ltd.).**—Regd. Nov. 27, 1896.—Cap. 500*l.* in 1*l.* shares. Chemists and druggists. Regd. Off., 1 Market Street, Prescott, Lancs. Return made up to April 6; filed April 8, 1897. 405 shares taken up, and 405*l.* paid.
- J. Wilson & Co. (Ltd.).**—Regd. April 4, 1892.—Cap. 10,000*l.* in 1*l.* shares. Mfrs. of and dealers in drugs, chemicals, and pat. meds. Regd. Off., 127 Tachbrook Street, London, S.W. Return made up to Dec. 18; filed Dec. 29, 1896. 6,207 shares taken up, 6,200 issued as paid, and 7*l.* paid.
- Wilton & Co. (Ltd.).**—Regd. April 15, 1896.—Cap. 5,000*l.* in 1*l.* shares. Chemists, druggists, and mfrs. of "Golden Nugget Ointment." Regd. Off., 17 Withy Grove, Manchester. Return made up to Aug. 28; filed Sept. 4, 1896. 1,451 shares taken up, and 500 issued as paid. 10*l.* called on 951, and 475*l.* 10*l.* received.
- George Wilton, Son & Co. (Ltd.).**—Regd. Jan. 24, 1887.—Cap. 50,000*l.* in 5*l.* shares. Chemists, druggists, and drysalers. Regd. Off., Victoria Works, Doncaster. Return made up to April 23; filed April 28, 1897. 4,034 shares taken up, 2,000 issued as paid, 5*l.* per share called on 1,266 and 3*l.* per share on 768, and 8,634*l.* paid.

Wincarnis Company (Ltd.).—Regd. Nov. 12, 1896.—Cap. 50,000/., in 25/ shares (1,200 Pref. and 800 Ord.). Medicated-wine mfrs., chemists and druggists. Regd. Off., St. Benedict's Street, Norwich. Return made up to March 17; filed March 20, 1897. 207 Pref. and 25 Ord. taken up, and 200 Pref. issued as paid. 1/ per share called on 7 Pref. and 25 Ord., and 32/ paid.

Nahor Withnell & Co. (Ltd.).—Regd. Nov. 19, 1894.—Cap. 2,000/., in 1/ shares. Chemists and druggists. Regd. Off., 85 Moss Lane West, Manchester. Return made up to Feb. 24; filed Feb. 25, 1897. 1,595 shares taken up, 1,500 issued as paid, and 95/ received.

John Wood & Co., Leigh (Ltd.).—Regd. Nov. 7, 1895.—Cap. 15,000/., in 10/ shares. Mfg. chemists and bone-size mfrs. Regd. Off., Park Bone-works, Leigh, Lancs. Final meeting of shareholders held April 27, 1897, to receive account of liquidation.

Woodcock's Ammonia Foam Company (Ltd.).—Regd. Sept. 10, 1896.—Cap. 5,000/., in 1/ shares. Chemists, druggists, and pharmacists. Regd. Off., La Ferry Buildings, Woodside, Birkenhead. No returns.

James Woolley, Sons & Co. (Ltd.).—Regd. Jan. 7, 1895.—Cap. 150,000/., in 10/ shares. Pharmaceutical chemists and wholesale and retail druggists. Regd. Off., 12 Victoria Bridge Street, Salford, Manchester. Return made up to June 12; filed June 15, 1897. 12,049 shares taken up, and 12,042 shares issued as paid; 10/ per share called on the others and 70/ received.

Woolston's Drug Company (Ltd.).—Regd. Dec. 8, 1892.—Cap. 1,000/., in 1/ shares. Regd. Off., City Buildings, Upper Accommodation Road, Leeds. Return made up to Feb. 3; filed Feb. 4, 1897. 650 shares taken up, and 400 issued as paid; 15s. per share called on others, and 193/ 15s. paid, leaving 1/ 5s. in arrears.

Worth's Perfect Food (Ltd.).—Regd. June 17, 1897.—Cap. 30,000/., in 1/ shares. Invalid food mfrs., chemists and druggists. Regd. Off., 7 Throgmorton Avenue, London, E.C. No returns.

Wortley, Cane & Co. (Ltd.).—Regd. April 14, 1896.—Cap. 5,000/., in 5/ shares. Chemical mfrs. Regd. Off., Causeway, Wandsworth, London, S.W. Return made up to May 12, 1896; filed Feb. 4, 1897. 500 shares taken up, 400 issued as paid, and 500/ received.

Wrigley & Co. (Ltd.).—Regd. June 27, 1895.—Cap. 1,000/., in 1/ shares. Wholesale and retail chemists and druggists. Regd. Off., Queen Street, Morley, Yorks. Return made up to Feb. 15; filed Feb. 24, 1897. All shares taken up, and no calls made.

Wyleys (Ltd.).—Regd. Aug. 31, 1891.—Cap. 60,000/., in 10/ shares (3,500 Ord., 960 "A" Pref., and 1,540 "B" Pref.) Wholesale and mfg. chemists and druggists. Regd. Off., Wheatley Street, Coventry. Return made up to Feb. 20; filed March 3, 1897. 1,367 Ord. shares and all the Pref. taken up, and 3,860 issued as paid. 10/ per share called and 70/ received on 7 Ord. shares.

Y

Yeatman & Co. (Ltd.).—Regd. Jan. 30, 1895.—Cap. 8,5000/., in 1/ shares (50,000 Ord., 10,000 Management, and 25,000 Pref.). Druggists' sundriesmen. Regd. Off., 7 Denmark Street, St. George's East, London, E. Return made up to Feb. 26; filed March 2, 1897. 45,000 Ord. and all Management and Pref. shares taken up, and all except 7 Ord. shares issued as paid. 7/ paid on the 7 Ord. shares.

Yorkshire Herbal Remedy Company (Ltd.).—Regd. June 17, 1897.—Cap. 1,000/., in 1/ shares. Regd. Off., 136 Leeds Road, Bradford. No returns.

Z

Zil (Ltd.).—Regd. July 1, 1897.—Cap. 20,000/., in 1/ shares. Soap, dye, and chemical mfrs. Regd. Off., 34 and 35 High Holborn, London, W.C. No returns.

Zomela Company (Ltd.).—Regd. April 27, 1897.—Cap. 10,000/., in 1/ shares. Mfg. chemists and druggists. Regd. Off., Zomela Buildings, John Bright Street, Birmingham. Return made up to Sept. 6; filed Sept. 10, 1897. 5,500 shares taken up, 400 issued as paid, 1,495/ received, and 5/ in arrears. Wm. M. Jones, chemist, holds 1,579 shares.

Zotis (Ltd.).—Regd. Sept. 22, 1896.—Cap. 5,000/., in 1/ shares. Pat. med. proprietors, chemists, and druggists. Regd. Off., 28 Gray's Inn Road, London, W.C. Return made up to Jan. 28; filed Jan. 27, 1897. 4,907 shares taken up, 4,900 issued as paid, and 7/ received.

At the Counter Abroad.

THIS is a letter from a native which Mr. Kingston, Malta, sends us:—

SIR,—I am of a dark colour, please have you got something that in a few days I became perfectly white with it, but, not after when I didn't use it, I became of a dark colour again. Please if you got it write me what it is and how much is it, and if you haven't write me that you haven't.

A cosmetic lotion was supplied without guarantee.

MR. H. SADLEIR, Mafeking, sends us a bundle of written orders received at the counter there and at Cape Town, which shows how natural corrupt spelling is on both sides of the Equator. Hykriepyrkie and other of our old acquaintances are there. Acid of borraccia has an Italian look, while shrup of shlups (for oxy. scilla) takes on a Dutch accent. Homislar, ameline dye, and Osmond's cemetery (for Osmond's remedy), are merely Cape-cockneyisms.

IN INDIA.—This is a copy of an order recently sent by a "literary" native in Scinde to a local English pharmacist:—

Dear Sir

Will you favoured enough to send me the following things for the use in my Photography's work. I am as an old Native Photograph.

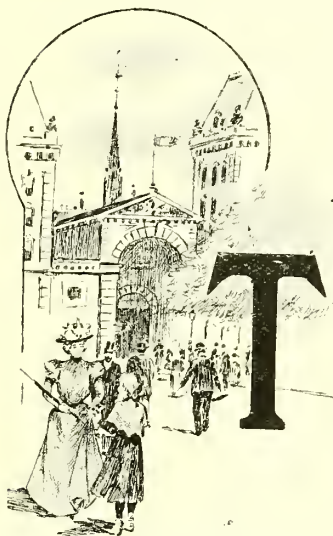
Porcelain Cup one for nitrate of silver to making in which nearly one pound contains, and other for the gold contains 2 ounce in both will be put at heat to making in. and 2 trays porcelain 6 inches in size length. One Pestle & Mortar in which one pound slution be made will be glass or Porcelain; Corks for Bottles 100 small & large. one Distilled for water if nearly Rs 5. All the Chemicals will be fresh and a new one because with your favour & helps I may begin this work and even I hopes to my Almighty God, you will be favoured to my poorness & make me glade to take the Price of things a little less than the others as for my poorness & shall be pray ever and ever for your longe life & prosperity and at present I am sending you Rs 25/- Money Order & for your remaining which will be remains in account you will favoured me of a month and the Parcel will not be value payable because if I alive I will send you after one month at meeting me the Parcel of the things, and also pray for me that I may be successful in this work doing after many years, nearly 20

I am your obedient a poor
one Mohamed Panah State of
Meer Ally Moral Khan Sahib Bahadur.

AT THE GERMAN COUNTER.—Two "apotheker" anecdotes, which if not true *solo ben' trovate*, come from Germany. No. 1.—The night-bell of the Krähwinkel pharmacy rings furiously. Sleep-drunken assistant pulls open the door, and is hit about the body by two sacks of potatoes thrown from a cart. The thrower, who has been charged by his master, a farmer in the district, to deliver the sacks as a present to the Mayor of Krähwinkel, has whiled away the evening at a wayside inn, and arrived in the town when everybody was abed. Not daring to rouse the high and mighty functionary for whom the present is intended, the bright idea has struck him that a pharmacist is expected to be up day and night. He therefore shoots the sacks at the apotheker, with the request that they may be delivered to his worship first thing in the morning. No. 2 anecdote illustrates the ignorance still prevailing among the rural population of Germany, in spite of all these years of the schoolmaster abroad:—Farmer, entering village pharmacy in Wurtemberg, demands sixpennyworth of "*Armesünder-schmalz*:"—fat of a hanged criminal—a local specific of high repute as a cure for rheumatism. The "apotheker" puts up the customary box of hog's-lard dispensed in such cases. Farmer eyes the packet curiously, and finally, with that touching belief in the universal knowledge of an "apotheker" characteristic of the countryside, asks, "What may *he* have been hanged for?" (referring to the supposed criminal). "I can't remember precisely," is the answer; "but I know he led a life like a hog." Farmer departs satisfied, shaking his head at the wickedness of the world.

IN provincial towns in the North of Ireland druggists deal in a good many lines somewhat outside strict pharmacy. In a Londonderry firm an order was received for "2 lbs. bleacher's pins." The parcel was put up and handed to a novice to write contents on. The parcel was duly marked "2 lbs. Beecham's Pills."

The Paris Municipal Laboratory.



ENTRANCE TO THE PARIS MUNICIPAL LABORATORY.

THE newspaper-reader has few of the scientific institutions of the French metropolis more frequently brought to his notice than the Municipal Laboratory. The President or citizens of the Republic are menaced with bombs (harmless or otherwise) — a fatal explosion of gas occurs — the Parisian aristocracy is decimated by a conflagration — a new and ingenious adulteration is inflicted on the metropolitan public — the daily wine or water is alleged to be contaminated — in all these and in many other circumstances M. Girard and his assistants appear upon the scene, inspecting, analysing, noting, and recording the scientific facts in the inter-

ests of justice, with an alacrity and an accuracy which is taken as a pure matter of course by those over whose interests he watches so keenly. "The laboratory has now entered into our daily life," a chemist attached to the institution said to me recently, "but you would hardly believe the

FIERCE ATTACKS

that were made upon it in its early days. The principal object for which the laboratory was established was, of course, the prevention of adulteration. Our reports regarding the composition of certain aliments not unnaturally brought upon us the wrath of the more questionable class of dealers,



OFFICE OF M. SANGLE-FERRIERE SOUS CHEF OF THE PARIS MUNICIPAL LABORATORY.

and the newspapers, who always like a bogey, used to look upon it as a safe subject for attack. The laboratory has been abused as a political institution and a sinecure for the *protégés* of the Municipal Council; and the favourite charge of dealers has been that the same article would be returned labelled 'Good,' 'Bad,' or 'Indifferent,' if a sufficient number of samples were submitted and the fact that they

were all taken from the same package were cleverly concealed." Most of these criticisms have been "lived down" by eighteen years of steady useful work.

ORIGIN AND PROGRESS.

Councillor Dumas moved in 1876, at one of the meetings of the Paris Municipal Council, "That it was desirable to establish an analyst's office, where, on payment of a small fee, any purchaser might be informed whether his wine was artificially coloured or not." Dr. Métivier in 1878 drew up a report favourable to the scheme, and the sum of 12,600*f.* (500*l.*) was voted for the installation the same year. At first it was not open to the general public; but since February, 1881, its services are at the disposal of every inhabitant of the Seine department. Since then it has annually grown in importance. In 1881 its budget was 129,800*f.* (5,151*l.*), and in 1883 206,890*f.* (8,210*l.*). The last detailed figures were published in 1883, and were made up as follows, the sterling equivalents for the francs being given:—

(1) Salary List.

	Per annum
1 head of laboratory	£320
1 sous-chef	240
25 analytical chemists:—	
2 head chemists at 180 <i>l.</i>	360
3 chemists at 144 <i>l.</i>	432
6 " 120 <i>l.</i>	720
7 " 96 <i>l.</i>	672
7 " 84 <i>l.</i>	588
20 inspectors:—	
5 inspectors at 120 <i>l.</i>	600
5 " " 96 <i>l.</i>	480
10 " " 84 <i>l.</i>	840
2 laboratory attendants at 60 <i>l.</i>	120
2 porters at 60 <i>l.</i>	120
1 head clerk	144
3 clerks at 84 <i>l.</i>	252

In all 55 persons. Total salaries £5,888

(2) Expenses.

Experiments, instruments, chemicals, and glassware	1,000
Office expenses and printing account	240
Assistants' uniforms, water, rates, insurance, &c.	128
Purchase of a gas-engine	160
Purchase of a magneto-electric apparatus	80
Micrographic pocket-cases with testing-apparatus for inspectors	40
Platinum	40
Fares of inspectors and expenses of delivering samples	600
	£2,288

(3) Premises.

Cleaning and repairs	100
Total	£2,388

Since 1883 the budget has mounted to 284,140*f.* (11,275*l.*), and the staff has been increased to 1 head of laboratory, 2 sous-chefs, 3 principal chemists, 28 chemists, 4 manipulators, 26 inspectors, several clerks, 1 laboratory attendant, 4 porters, and 1 driver.

The Municipal Council, as is well known, does not make the position of the Prefect of Police here exactly a bed of roses, and the sometimes strained relations between the two authorities is supposed to account for the stationary character of the laboratory budget during the last twelve years.

THE EDIFICE AND THE GUARDIANS.

The laboratory is not situated at the Hotel de Ville itself, but in the Rue de la Cité, its entrance being almost exactly opposite the great western portal of the Cathedral of Notre Dame. It is lodged in a sort of "building of all work," where it shares the ground floor with the stables of the Municipal Guard; sundry police offices and barrack-rooms occupying the upper portion. The soldiers at the outer gateway, with fixed bayonets, are easy enough to pass, but the door of the laboratory itself is less ostentatiously but more jealously guarded. Outsiders are not admitted, and "No admittance except on business" is a very stringent watchword. I had previously obtained a card from Dr. Bordsas,

and the white-bloused attendant who received me made careful inquiries as to my identity, and then ushered me direct into the private office of M. Girard's lieutenant. The latter, a tall, black-bearded man, approaching middle age, at once expressed his willingness to impart any information which might interest *C. & D.* readers. His particular department, he explained, was analysis-supervision, while his colleague M. Sanglé-Ferrière supervised administrative details. The work of the laboratory might be classed under three heads:—

(1) Free analysis of any alimentary substance submitted by vendor or purchaser. In this case the article is simply labelled "Good," "Passable," "Bad, but Harmless," or "Adulterated and harmful," and the complete analysis is retained by the laboratory.

(2) Paying-analysis of same articles. Fees from 5f. to 20f. (4s. to 16s.) according to the nature of the product. In this case a complete and detailed statement of the result of the analysis is handed to the owner.

(3) Police or adulteration analysis of samples collected by the twenty inspectors. In this case a form showing the result is drawn up and handed to the Prefecture of Police.

The first and third classes are confined to Paris and district; the "paying" analyses are received from all parts, even from abroad.

PAYING-ANALYSES.

The following extracts from the tariff will give an idea of the charges made:—

Wine: Dosage of alcohol and densimetric extract ...	5
" Weight of dry extract ...	5
" Examination for detection of artificial colouring-matter ...	10
Sugar and Glucose: Polarimetric examination ...	10
Milk: Chemical analysis, density, cream, dosage of extract butter, detection of antiseptics, &c. ...	10
Pharmaceutical Products: Examination and report as to whether they agree with Codex or with doctor's prescription ...	20
Wine: Complete analysis as described below ...	20
Hair-dye: Detection of poisonous metallic ingredients ...	20
Carbide of Calcium: Detection of impurities ...	10
Mineral Water: Dosage of extract and of the principal element ...	20

The 20f. analyses are the most general, and include the complete examination of cider, beer, vinegar, tea, coffee, and chocolate. The complete chemical analysis of water by the gravimetric method, together with a bacteriological analysis, costs 125f. (5l.); but partial analyses of a useful character are only charged 20f. (16s.)

NOT A POLICE ESTABLISHMENT.

The Laboratory does not itself undertake prosecutions for adulterations. Its functions cease the moment that the report sheet has been handed to the Prefecture of Police; it is for the officials there to judge if the case is sufficiently flagrant to justify proceedings under the French Food and Drugs Acts. "Certainly," says M. Girard, in his official report, "we should have been glad to have found fewer adulterations, if possible, . . . but we have not the right to suppress the result of any analysis"; and he adds, "The delinquents themselves, we are convinced, no longer dispute, in their heart of hearts, the justice of the sentences passed upon them. The Municipal Laboratory is as free to them as to everyone; if they are distant and unable to leave business, they have only to hand the samples to the Commissary of Police of their 'quarter' [Paris is divided into eighty "quarters," each, roughly speaking, from a quarter of a mile to half a mile square; the samples are conveyed in cellular vans—the "Black Maria" of Paris], who will forward them to the laboratory and return the report." He urges dealers, when closing a bargain, to take a sample of the goods for the laboratory, and seal it under the double signature of vendor and buyer (the purchase-money not to be paid till the analysis is made known); and he quotes Cobden's opinion that the Frenchman shows his lack of business intelligence by not being always loyal, and delivering goods up to sample.

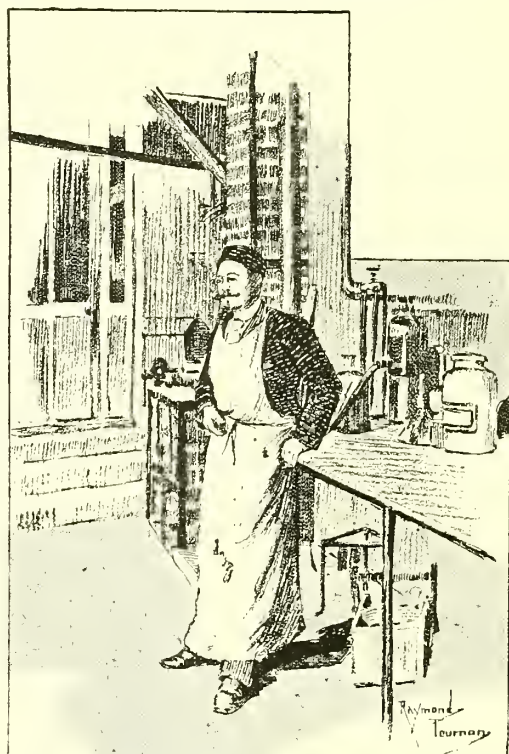
THE INSPECTORS.

But to return to my conversation with Dr. Boidas. "Our inspectors go regularly round the shops and markets. Certainly

they go to the high-class shops as well: there would be an outcry were this not done. If they find goods unfit for human consumption, they can destroy them on the spot. If they suspect adulteration, two samples are taken, numbered, sealed, and certified by the inspector and the dealer; the latter signing the 'procès-verbal' of the seizure. The inspector offers to pay for all goods he takes. One of the samples is analysed, the other kept for one year in our store downstairs, in case of a counter-analysis being demanded. Twice a day the inspectors come here to report and take instructions."

"Have they power to enter all business premises?"

"Twelve of them are invested with the title and power of a Commissary of Police," I was informed. The very extensive authority of these important and perhaps, one might add, occasionally slightly tyrannical functionaries is so well known to all the inhabitants of Paris that I did not press the doctor further. He added that the inspectors carry a small case of microscopical and other instruments.



A CORNER OF THE PARIS MUNICIPAL LABORATORY.

The inspectors' monthly work may be judged by the following figures:—In October, 1896, 4,635 markets and shops were visited. The goods destroyed included 760 lbs. of fruit, 15 lbs. of mushrooms, 20 lbs. of tomatoes, 6 lbs. of melons, and 17 lbs. of fish. Six summonses were issued in graver cases.

The visits concerning paraffin and mineral oils numbered 344; mineral waters, 608; restaurants, 399; butchers, pork-butchers, &c., 147; bakers, 98.

The inspectors likewise assure themselves that beer-engines are kept clean, and that the regulation zinc counter of the Paris "Marchand de Vin" is in proper repair.

THE LABORATORY WORK.

"Every object brought to the laboratory for analysis receives a number. All those who handle it know it as No. So-and-so," Dr. Boidas explained, as we passed from his office into one of the three large ground-floor laboratories. Lofty, well-lighted, and airy, each of these rooms contains three large tables or benches, each of which accommodated four chemists and their apparatus. The analysts work in

sets of four, each sample thus passing through numerous hands, to that collusion could not long be kept secret.

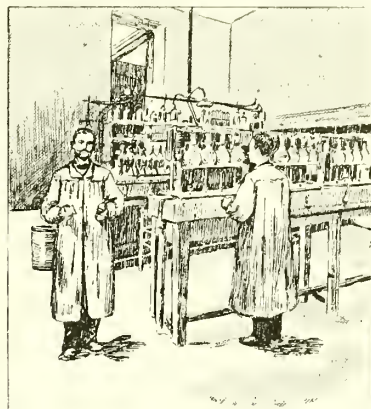
As has been explained, the original purpose of the laboratory was to assure the purity of the Frenchman's national beverage, and in 1883 half the samples submitted were of wine. Milk, however, has lately come to the fore, and the last figures published (1895) were as follows:—

	Public Analyses		Police Analyses (Samples taken by Inspectors)	Total
	Paying	Free		
Wine	300	1,262	5,402	6,964
Beer	12	19	657	688
Spirits and liqueurs...	49	42	314	405
Water	107	246	704	1,057
Milk	40	181	4,050	4,271
Butter, &c.	26	103	926	1,055
Coffee, chicory, and tea	15	10	885	1,010
Pepper and spices ...	—	3	771	774
Perfumery	—	2	10	12
Petroleum	7	—	308	315
Drugs and pharma- ceutical	1		211	216
Vinegar, cider, perry and syrup	16	44	468	528
Oils, bread and flour, sugar, jam, chocolate, pre- served meats, &c., toys, wall-paper, zinc, pottery, dyes, &c., bring up the grand total to.....	677	2,172	18,296	21,145

"You may put down 25 000 analyses for 1896," added Dr. Bordas, "and this year [1897] we shall very likely do 30,000."

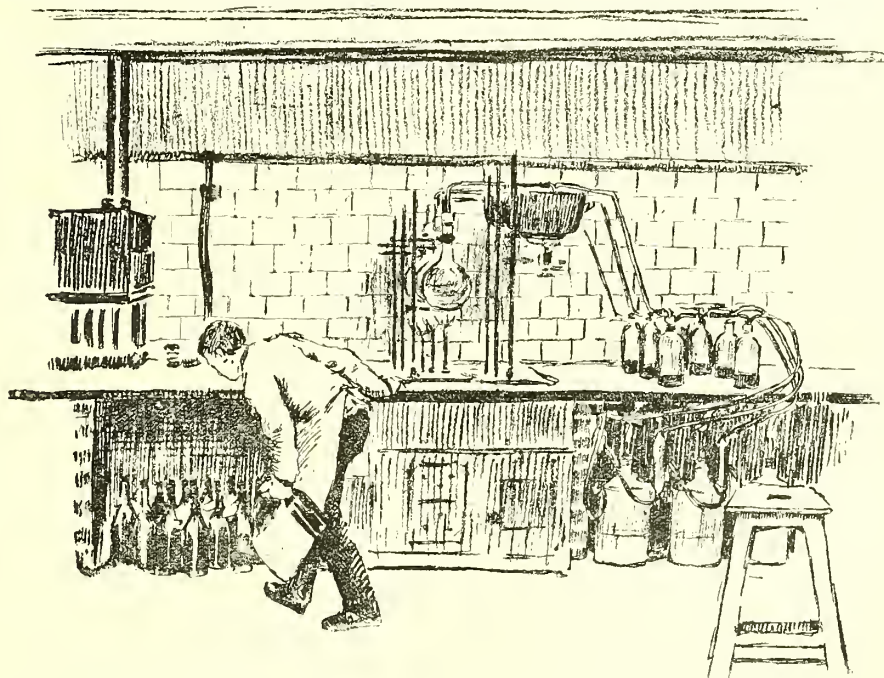
now instead of buying them; you will see the apparatus down-stairs. And we get through as much work as we can." And, suiting the action to the word, he introduced me to an intelligent young chemist with whom to visit the laboratories in detail, and returned to his own duties.

All analyses are checked, when possible, by an alternative process. For instance, the colouring of wine is tested first by the colorimeter and afterwards with chloride of lime. Then



CHEMICAL ANALYSIS AT THE PARIS MUNICIPAL LABORATORY.

comes the chemical and microscopical examination, the estimation of alcohol by distillation, checked by the ebulliscope, the determination of extracts at 100° C. *in vacuo*. Afterwards, the ash is weighed, the percentage of plaster calculated, and the sugar reckoned by fermentation. A polarimetric examination follows, the acidity tested by Pasteur's system or by a phenolphthalein process, which M. Girard considers preferable in the case of artificially coloured liquids; tartaric acid is estimated by Berthelot and Fleurieu's process;



APPARATUS INVENTED BY DR. BORDAS, SOUS CHEF OF THE PARIS MUNICIPAL LABORATORY FOR ANALYSIS OF WINE.

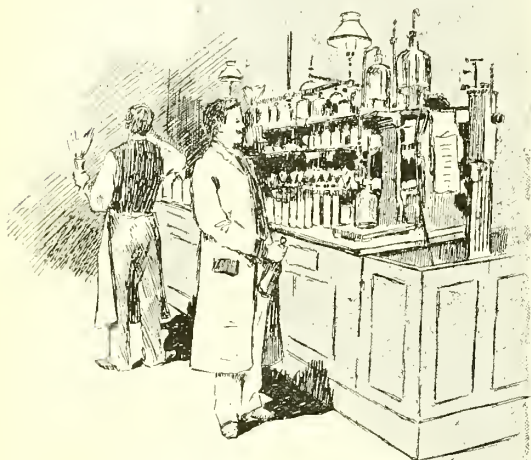
"How can you get through double work with the same staff?"

"And the same budget for chemicals, &c., which is still worse," replied he. "Well, we do things as economically as we can. For instance, we make our own alcohol and ether

and Dr. Bordas, in collaboration with M. Rackowsky, has devised a colorimetric method for the estimation of glycerine based on the reaction of bichromate of potash and sulphuric acid on the glycerine. The glycerine of the wine is distilled *in vacuo* and carried off by a steam-current.

PARIS MILK.

The French milkmen seem to have the inherent tendencies of the same class of men across the Channel. In pre-laboratory days the police and the drivers were in frequent collision the latter being occasionally caught in the act of watering their milk-cans as well as their horses, as they drove their loads from the railway-stations in the small hours of the morning. The trade is still fertile in expedients, and the laboratory has all its work to do to keep even in the race. Skimming and watering are still the mainstay of the



ANALYSIS OF MILK AT THE PARIS MUNICIPAL LABORATORY.

fraudulent milkman. Flour or dextrine is added to thicken the fluid; gum, eggs, sugar, caramel, gelatine, or isinglass restore its weakened taste; while liquorice-juice and cooked carrots take off the "sky-blue" tint. The lacto-densimeter and the cremometer are scarcely sufficient tests. The method followed are briefly these:—Malt is added to the coagulated milk, which is heated to 25° or 30° C. (75° to 85° F.); if cane-sugar has been added, fermentation quickly follows. The amount added may be judged by the activity of the fermentation, or by the polarimeter, or cupro-potassic liquor. To detect dextrine, or gum arabic, the whey is precipitated with alcohol. Feculent matters, decoctions of bran or rice, can be detected by the microscope or even the naked eye; while glycerine and isinglass are searched for by precipitating the serum with tannin. Reagents detect the colouring-matters, and bicarbonate of soda is found by adding a drop or two of acetic acid to the heated milk. If pure it coagulates at once. To find boracic acid, alcohol is added to the extract, which is then set on fire, and the colour of the flame allows the analyst to judge. Formaline is detected by "floroglucine" with soda or potash added.

PARISIAN BUTTER

has much improved since the Municipal Laboratory was instituted. In fact, the officials state that Paris has now the purest butter of any capital in Europe. The method of testing is, I believe, different to that employed in London, and is absolutely exact. The butter is precipitated by a solution of acetic acid; the precipitate is filtered, folded up, and put into an exhaustor containing ether. The ether is distilled off, the residue is washed, and the fatty matter which remains enables the exact standard of the butter to be determined.

MISCELLANEOUS WORK.

Pepper was under examination during my round; this is adulterated in Paris to a large extent. One genius sold as "pepper-berries" globules of gum and plaster, with just the faintest suspicion of pepper inside! Jams are mentioned. "Do you report if they are not made entirely with natural fruit?" I asked. "That depends on how they are labelled,"

said Dr. Bordas. "If they are marked 'de fantaisie,' we class them as 'good' so long as they contain no deleterious ingredient. But if they are described as pure-fruit jams, we report what they are."

Pharmaceutical preparations are rarely examined, as the School of Pharmacy is nominally charged with the inspection of pharmacies. The two other laboratories visited were very similar to the first. On the ground floor are M. Girard's private laboratory and office, the sous-chefs' office, the clerks' office, and the room for the reception of samples. Downstairs are a gas-engine and various machinery, a bacteriological laboratory, a dark-room for microscopic photography and spectrum-analysis, another for radiography, a distillery, a wash-up room, a room for the inspectors, and the store of



M. GIRARD, CHIEF CHEMIST OF THE PARIS MUNICIPAL LABORATORY.

duplicate samples. The more evil-smelling chemical-work is done in the basement, where there is also a gas-analysis laboratory. Gas is frequently tested at the laboratory to decide its purity and lighting-powers, while samples of air from barracks and schools have likewise been examined and reported upon.

"And the bombs?" I asked.

"Oh, we don't open them here, you may be sure. That is done in an unfrequented spot. We examine the pieces here."

The old saying that "they do some things better in France" seems to have fallen somewhat into disuse, but I came away from the Municipal Laboratory with the feeling that as regards protection from adulteration in matters of food and beverages Parisians may (to use a French locution) "sleep on both their ears."

THE iodine number of the volatile fatty acids of cheese may be taken as an indication of purity. This number should not exceed 95.

Pharmaceutical Society of Great Britain.

NORTH BRITISH BRANCH.

THE third evening meeting was held on January 19, at Edinburgh. Mr. J. Laidlaw Ewing (Chairman) presided, and there was a good attendance, including several members from Glasgow. The principal business of the evening was a paper by Mr. DAVID STORRAR (Kirkcaldy) on

PHARMACEUTICAL ETHICS.

Mr. Storrar said that at the Pharmaceutical Conference meeting held in Glasgow last year a paper on this subject was read by Mr. Leo Atkinson, and, in summing up the discussion which followed, the President (Dr. Symes) said it was a matter which was worth consideration whether a whole day at some future time should not be set aside for the purpose of such discussions. They were just approaching the opening sessions of all the provincial Associations, and he did not see why a paper should not be read before every Association as well as at Bloomsbury Square during the coming winter, when the whole matter might be thoroughly sifted.



MR. DAVID STORRAR.

In a weak moment he had volunteered to read a short paper on the subject. He claimed no special knowledge of the subject, and had no panacea for diseased pharmaceutical morals to bring under their notice. His sole object was to initiate discussion upon a subject, important and interesting to them all, in the hope that such a discussion might help to ease the friction which modern business-methods tended so much to increase.

Since Mr. Ince read his paper on the subject to the Conference meeting in 1866 the trade of pharmacy had changed much in character—in one way to the better, in another to the worse. In 1866 anyone could start in business as a chemist and druggist; it was a free trade, with no special legal restrictions. Two years later it was considered "expedient for the safety of the public" to render it unlawful for any person to keep open shop for the retailing or dispensing of certain scheduled poisons, or to use the title of chemist and druggist in any part of Great Britain, unless such person was registered as an examined and qualified man. This

ACT OF 1868

was welcomed by the pharmacists as not only required for the safety of the public but as a distinct boon to the trade, carrying with it a certain amount of protection in return for the qualifications which the Act demanded. By-and-by, however, it was discovered that the proverbial coach-and-four could be driven through this Act as well as others, and that the principal protection it gave was to illegitimate, if strictly legal, trading, so that their strongest opposition now was from co-operative stores and limited companies, which did

not even pretend to be composed of qualified men. It was this state of things which made the consideration of pharmaceutical ethics more important than ever it was. The question was simply this—How could they best do their duty to themselves, to each other, and to the public, and at the same time uphold their position as members of a qualified profession against what they considered to be an illegitimate and unfair competition? The primary question was, of course, what should be their ethical relation to each other, because not until they agreed as to that could they hope to agree as to their conduct to those whom they rightly looked upon as outsiders. And first, he thought, they ought to define

WHAT WAS MEANT BY ETHICS.

In its simplest form it could best be expressed in the words of the old proverb, "Do to others as you would that they should do to you." As to pharmaceutical ethics, so far as pharmaceutical could be differentiated from other ethics, the best definition he had seen was that contained in a leading article in their *Journal* of 1853. It said, "There are in all professions certain rules of conduct, understood if not actually agreed upon among the members, a deviation from which was held to be unprofessional. These rules have no relation to the law of the land; they constitute a voluntary and self-imposed restraint, having for its object the elevation of the tone and character of those who are under their influence and the maintenance of harmony and good order in the profession. It is to such laws that the term ethics is applied." In opening the discussion, therefore, he would largely confine himself to their duty to themselves, to the public, and to their trade organisations. First, then,

DUTY TO THEMSELVES.

To the man who had entered into business with the sole object of making money he had nothing whatever to say. To discuss ethics with such a man was useless, as he did not understand the true meaning of the term. He might be "indifferently honest" and in a sense honourable, and even charitable, but selfishness being the mainspring of his actions he could not consider his neighbours' interests as well as his own, which was the foundation of ethics. He was aware that it was almost farcical to suppose that in these days any sane man would take to pharmacy as a money-making profession unless of course he had invented a pale powder for pink people—(laughter)—or a catch-gull syrup, in which case a knowledge of pharmacy would be rather a drawback than otherwise. But even while one might not lie to sell his syrup—or the public—for a cool million, or, retaining the kernel in his own hands, transfer the shells to a confiding public for a consideration on the promise of 10 per cent. dividends, he might have all the will to do so. It was the motive, not the result, which was objectionable, and it was to the full as deteriorating to sell oneself for coppers as for sovereigns—and did not pay so well. (Laughter.) But while

MONEY-MAKING

should not be their sole aim in business, it was, and must always be, an important object. They did not "live laborious days" behind the counter simply for the fun of the thing. "The labourer is worthy of his hire," and they must "live to eat, as well as eat to live." To make his business pay was every business man's primary object, and to do so honestly and with due regard to his neighbour and the public interest was the aim of every right-thinking man. Their trade was a poor one financially, and could easily be made a petty one, but rightly pursued it was an honourable and useful calling. Pharmacy might only be the handmaid of medicine, but it could do much to help suffering humanity, and the man who followed it conscientiously, and made it his pride to send out and dispense good honest pure drugs, was doing the world good service, and would continue to be recompensed for that service. To secure that recompense, however, a man must be true to himself; he must assert his right to be looked upon as something more than a tradesman. He must lay claim to be something more than a seller of patent medicines and perfumery—(applause)—or even of scheduled poisons. In dispensing he must insist upon payment for something more than the value of what he weighed out and measured—namely, the skill and experience required in so doing—and he must do so, not only for his own

sake, but for the sake of the profession to which he belonged. He could not help thinking that for much of the depressed trade and diminishing profits from which they were suffering at the present time they had to blame their own faint-heartedness and want of trust in each other, which had led the public to take them at their own valuation. They must uphold the position taken up by those who founded their Society upon the sure grounds of professional education and fitness, and to whom any corporate life or real union they possessed was due. Their action welded together a disunited trade into an organised and influential body whose position was so recognised that the Government had no hesitation in entrusting to it large administrative powers. Their first ethical duty, then, was to see that no individual action of theirs would give away that position which had been secured to them. And they must not rest content with that, but individually try to add something, however little they might have the ability to add, to the efficiency and sum total of knowledge of that trade which they had chosen as their life work. Second, their

DUTY TO THEIR FELLOW TRADESMEN.

He was not Quixotic enough to argue that the interests of their neighbours should be their first consideration. That would be "magnificent but not war," and that they were more or less at war with each other to secure public favour was undoubted. But while they were in this sense at war, they had a bond of union which should be stronger than the force which kept them apart—(applause)—a mutual interest which should at least induce them to fight fair. They had to serve the public—in some cases an exacting public—and when "one member suffers the whole body suffers with it." It was only a truism, therefore, that both upon the higher ground of fair and honourable dealing as well as upon the lower ground of business policy they should consider their neighbours' interest as well as their own. This branch of the subject was a large one, and to treat it fully would require much longer time than he had at his disposal. One or two points only could be touched upon. First, there was the question of prices, or perhaps he should rather say of

UNIFORM PRICES.

which had been a question of debate, and in some districts of asperation, ever since he remembered. This was a difficult question, and one upon which he confessed that he for one had changed his mind. He thought, and still thought, that in certain limited districts, and in the smaller towns, it was possible, and even desirable, that an understanding as to prices should be come to, but any general agreement would be unworkable. As Mr. Ince pointed out in his paper—which was as true now as it was then—environment, which meant the greatest possible difference in rents, rates, and general expenses, the nature of the trade, whether cash or credit, and the class of customers, whether rich or poor, made it impossible to fix a hard-and-fast scale. That the same courtesy, attention, and care for their interests should be given to the poor as to the rich went without saying, but those tradesmen who were forced to carry on their business in expensive districts for the convenience of their customers were entitled to be recompensed for the additional expenditure entailed upon them for so doing. But while any general scale of dispensing-charges was, he was afraid, impossible, especially with their present surroundings, there were certain general ethical principles in relation to the question of prices which they ought to practise. There was, for instance, the principle which he had already referred to—that while the selling of drugs was a trade the dispensing was an art or profession for which special education and training were required, and for which the dispenser ought to be paid over and above the selling-price of the drugs used. Then, again, while a man could not well be blamed for adhering to his own price-list, if founded upon this principle, he was hitting below the belt when he knowingly, and for selfish reasons, deliberately cut in price below his neighbour. It was surely possible to fix at least a point below which a man should not go without being held as not only unjust to his neighbours, but to himself and his profession.

MUTUAL ACCOMMODATION.

This was a question which affected those who lived in small towns more than those who lived in a city, such as Edin-

burgh, where there are so many wholesale houses to draw upon. He was happy to have the opportunity of saying publicly that his experience had been most gratifying, as, though he had been over thirty-five years in business, he had never once been refused, or had a suspicion of being refused, by a neighbour the supply of anything of which he had run short, and which his neighbour had in stock. He was told, however, that that was not a universal experience, and would ask—Why should it not be? Opposition, like the poor, they would always have with them, and they need not add to the unavoidable worries of life those which were avoidable, and it appeared to him that not only were mutual obligation and help required by ethical considerations, but by good business policy. In these days of limited companies with large turnover and large capital enabling them to buy on the best terms, much could be done by legitimate traders to assist each other in holding their own if their policy was combination instead of isolation. Lastly, under this heading there was the question of

ASSISTANTS AND APPRENTICES.

It was unfair, as well as illegal, to work a business entirely with unregistered men, and it was also unfair to flood the trade with an unnecessary number of apprentices, and especially with lads whose education was so insufficient as to handicap them in their attempts to pass the examinations. He did not mean to assert that there was a great deal of that sort of thing going on, but it did exist, and in these days of keen competition the temptation to it was great for the purpose of keeping down expenses. A very little consideration, however, would show that it simply aggravated the evil of competition. It was the imperfectly-educated apprentices who swelled the ranks of failures in the Preliminary and Qualifying examinations. (Applause.) It was from those failures that the promoters of bogus companies were recruited, and it was from these companies, conducted upon purely trade and money-making lines, that their keenest opposition came. (Applause.) Might he add that a good preliminary education was only the foundation upon which the future training must be built up, and that therefore another very evident duty of those who would have the true interests of the trade at heart was to see that their apprentices received that training which was necessary to turn them out as efficient assistants? Third, their

DUTY TO THE MEDICAL PROFESSION

and to the public. Their duty was to dispense medicines, not to prescribe them, and in return they claimed from their medical friends a recognition of the converse—that their special duty was to prescribe and not to dispense. Of course, there was a general rule which could not be too rigidly enforced, and must be interpreted in a commonsense way. It would be absurd to refuse to the pharmacist who had some knowledge of remedies what was claimed by every old wife in the country who had none—the right to recommend simple remedies for simple complaints—the right to sell to a customer a liver-pill or a bottle of cough-mixture—but he went out of his province when he attempted to diagnose disease for which he had no training. For the pharmacist to do this was simply quackery. Then, again, it would be against public interest and convenience to prevent medical practitioners in country districts dispensing their own prescriptions. It was very evident, however, that where both were available the interest of the public lay in separating the duties. If, on the one hand, the pharmacist was untrained in the recognition and treatment of disease, on the other, his knowledge of pharmacy was greatly in excess of that of the average medical man. Living as they did in the East of Scotland, where, happily for them, prescribing and dispensing were in the main recognised as separate professions, they had a difficulty in realising how burning a question this was in certain parts of the country, where some of their best men were forced to prescribe in order to make a living. It was satisfactory to know, however, that the recognition of pharmacy as a distinct profession was slowly but surely making its way, and that its rights as such were more and more being recognised by the medical profession. He thought their duty to the medical profession and the public might be summed up under three headings—(1) that no drug or remedy be taken into stock or sold which was not absolutely genuine, and no preparation

made or kept which was not prepared strictly according to the recognised standard; (2) that in dispensing the most rigid adherence be given to the directions of the prescriber; and (3) that no deviation be made from the prescriber's instructions without previous consultation with him if that was at all possible, and without noting such alteration on the prescription. (Applause.) Was it necessary to say a single word in support of these propositions? He thought not. They were only those which were acted upon by every self-respecting pharmacist. To act strictly up to these rules was becoming more difficult every day on account of the ever-increasing number of

SPECIAL PREPARATIONS

which were being pressed upon the notice of medical men. These were largely—much too largely, many of them thought—taking the place of the authorised preparations of the Pharmacopœia, and they were becoming the bane of every dispenser. He was called upon to dispense D's capsules or E's liquor, which he did not stock, but he did stock A, B, and C's, which he knew to be equally good, and was sorely tempted to send out. His duty, however, appeared to him to be perfectly clear. In this instance D, added to the name of the preparation, carried with it as much weight as the magic letters B.P. Fourth, their

DUTY TO THEIR TRADE ASSOCIATIONS,

both local and national. This was a most important point. A due fulfilment of their ethical obligations was by no means easy. It was their duty, for instance, to love their neighbour, but it was difficult to do so when they only saw him occasionally, and that through the plate-glass windows of an opposition shop. The case became very different when they met as fellow members of a local association. (Applause.) They might realise—and he believed most of them did realise—that they owed a duty to the trade to which they belonged, and they strove to perform that duty, but it was more or less of a task. But when they banded themselves together into local associations that duty became in most cases a pleasure. (Applause.) Even when they threw physic to the dogs, and joined in pharmaceutical golf, cricket, cycling, or fishing clubs, the benefit was an unmixed one. They found that their neighbour was something more than an opposition tradesman. He was a man, and as often as not a jolly good fellow as well. Let them cultivate the social element, therefore, as much as they could, and break down that petty jealousy of each other, and that want of unity which had hitherto blocked the way to all pharmaceutical progress as a trade or profession. It was, however, the support of local associations pure and simple that he would urge upon the trade. They all knew the old proverb about the bundle of sticks. Individually they could be broken easily, bound together they were unbreakable. He had a healthy disgust at the abuses of trade unionism and of the policy of some trade unions, but had thorough belief in the wisdom and necessity of the principle underlying these. By united action they not only acquired the power to help themselves, but by comparing notes they could do much to raise the status and efficiency of the trade to which they belonged, which was the only true progress. And what he had said of local associations applied with still more force and truth to the Pharmaceutical Society. (Applause.) Their Society could never be in the strict sense of the term a trade society. Its constitution and the duties assigned to it by the State prevented it being so, as it must hold the balance even between public and trade unionist. It was, however, the only national trade Society which could live, and to it their present position as a qualified and trusted profession was due. Surely, therefore, it was the evident duty of every member of the trade to give to this Society his support; and all the more was this the case if he had disapproved of its policy hitherto, as it was only by becoming a member that he could in any way control that policy. Let them hope, therefore, that the proposed widening of the doors of entrance to membership would be fully taken advantage of. He wished to say a single word in the way of appeal for support of the Benevolent Fund of their Society. Surely if any ethical obligation rested upon them to give fair play to those who were straining shoulder to shoulder with them in the race of pro-

fessional life, the obligation to help those who had fallen by the way was tenfold stronger. The help given by this fund was not confined to those who were or had been connected with the Society or subscribers to the fund. It was given freely and impartially to all who required it whose names were on the register, or to their widows or children. No part of the work of the Council had interested him more than this, and he could testify that no part of the work was done more conscientiously or had done more good. But how much more good could be done were the ethical obligation to support this fund more universally realised and acted upon by the trade! He concluded by saying they could not expect him to say anything new upon ethics, the principles of which were as old as the world itself, and the foundations of which were laid in their own eousciences. Let them build on that foundation, and there would be little to find fault with in the superstructure. (Applause.)

Mr. DAVID MCLAREN moved a vote of thanks to Mr. Storrar for his paper. They were peculiarly situated in Edinburgh, because medical men did not do any dispensing, and all the chemists got a share, although some of them did not get so much as they would like; but they were in duty bound as trade unionists to help each other, and the only way by which they could do that was to support the Benevolent Fund as far as their means would permit them to do so. (Applause.)

Mr. ANDERSON RUSSELL (Glasgow) seconded the proposal. It appeared to him that associations, or at least committees of associations, might do much to improve the moral tone of the business conducted by pharmacists in their respective districts. They could not compel individuals outside or within the Associations to act in accordance with their ideas of right and wrong, but much could be done by laying down rules a breach of which they would consider a non-compliance with the ethical code. It would be inadvisable to lay down very strict rules at the beginning, because they wished as far as possible, to begin with, to get a very large percentage, if not all the members in the district, to comply with them. He also suggested that they should send a resolution to the Council of the Pharmaceutical Society, expressing their opinion that the Council should have disciplinary powers given to it so that in certain cases they might strike names off the register. Of late some names had been struck off the list of membership. But did it follow that that gave them the power to strike these names from the register?

Mr. J. K. HILL said Mr. Storrar had referred to the fact that the main difficulties they had to contend with in trade matters seemed to depend on the co-operative movement. While there were many things in that movement which they might disapprove of, they were forced to recognise that it was only a part of the great social revolution that was going on all over the world, and it seemed to him that any attempt to get over the difficulty by stereotyping existing conditions was bound to fail, and that in any adjustment that might take place a knowledge and grasp of the fundamental principles of ethics was of first importance. The pharmacist might, however, secure his future by maintaining a high standard of educational efficiency, and alongside of that a high standard of professional efficiency. In regard to dispensing by doctors, he thought that in cities, at least, they had a grievance when doctors opened retail pharmacies for the dispensing of medicines, but under the charge of unqualified assistants. Even when the assistants were qualified he thought they had a grievance which ought to receive the attention of the Legislature. In Ireland the dispensing of physicians' prescriptions was absolutely restricted to the hands of trained chemists. That was a matter which must receive attention from the Legislature at no distant date.

The CHAIRMAN agreed that in regard to the remuneration that the qualified pharmacist obtained for dispensing he did not charge enough for his skill. It was very difficult to arrange uniform prices. The fact that many medical men now prescribe proprietary medicines was due to the fact of their insufficient acquaintance with *materia medica*. He hoped the teachers of therapeutics and *materia medica* in their colleges would give more attention to that point in future. They often found medical men prescribing in a way that was no credit to them. (Applause.) The social friendship encouraged by societies had been mentioned. He had noticed that in Edinburgh social friendship had been

promoted, not only by their meetings, but also through their amusements.

Mr. PETER BOA, referring to this point, reminded the meeting that the annual ball of the Edinburgh and District Chemists' Trade Association would take place on the following night. (Applause.)

ARGON AND HELIUM.

Mr. J. R. HILL said they had received as an addition to the museum a set of tubes of argon and helium which had been lent by Professor Norman Collie, F.R.S., London. These were subjected to an electric spark and exhibited spectroscopically to show their distinctive spectra. There were also exhibited specimens of emetine and cephaeline, and their salts, prepared from Carthage and Rio Ipecauanha by Mr. Whiffen, Battersea, London; also a set of thermohydro-meters and automatic stoppers by Fletcher, Fletcher & Co., through their agent Mr. A. Coats. This presentation was suggested by the paper read by Mr. Jack and Dr. Dewar at the last meeting on the metric system.

A vote of thanks was given to the donors.

PHARMACY ACTS AMENDMENT BILL.

At a special meeting, which followed the ordinary meeting, and to which registered chemists and pharmaceutical students were invited, the Pharmacy Acts Amendment Bill was considered. Mr. J. L. Ewing was appointed Chairman, and the draft Bill was held as read.

Mr. C. F. HENRY then moved—

That this meeting of registered chemists and pharmaceutical students, having considered the Pharmacy Acts Amendment Bill drafted by the Council, cordially approves of the same, and especially recognises the prudence and wisdom at the present time of limiting the scope of the Bill to urgent and non-contentious matters relating to the internal organisation and consolidation of the Pharmaceutical Society. The meeting further pledges itself to use every legitimate means to aid the Council in securing its speedy enactment.

Mr. HENRY, having explained the objects of the Bill, urged in answer to those who thought the Bill would depreciate the title of pharmaceutical chemist by introducing those who were not pharmaceutical chemists into the membership of the Society, that the title of membership was not a qualification because a large number of the present members of the Society were not pharmaceutical chemists. At the end of 1896 out of 2,159 members of the Society 1,584 were pharmaceutical chemists and 575 chemists and druggists. Sooner or later such an alteration would be an absolute necessity. In the *Pharmaceutical Journal* of January 1 some figures were given which showed that in 1876 there were 2,062 pharmaceutical chemists who were members of the Society, while in 1896 they had decreased to 1,584. Again, there were 339 chemist and druggist members in 1876, and in 1896 they had decreased to 574. In the course of nature the chemist and druggist members must become extinct; therefore, if such a Bill as this did not pass, in course of time there would be no Council, because there would be no members. In 1876 there were 1,520 associates in connection with the Society; in 1896 they had increased to 2,666. Fewer passed the Major examination now than formerly. That was another argument why the Society should be consolidated. He thought the Council were wise in restricting their action now to consolidating the Society, so that on some future occasion they could move in the other matters.

Mr. THOS. DUNLOP (Glasgow) seconded the motion, and said he advocated this policy three or four years ago at a meeting of the Glasgow Association.

Mr. G. COULL did not believe the result would be what the Council and those who promoted the Bill thought it would be. The Society in 1868 opened its gates as wide as possible and advantage had not been taken of it. He was not going to move an amendment, but he would leave the room before the vote was taken.

Mr. NESBIT criticised Mr. Henry's history in certain particulars. He, however, supported the Bill.

Mr. CURRIE agreed with the second part of the motion, but thought the proposal to substitute the word "student-associate" for "student" and "apprentice" was ridiculous.

Mr. ANDERSON RUSSELL stated that every chemist in Glasgow connected with the Association approved of the Bill so far as he was aware.

Mr. JOHN T. COATS supported the Bill.

Mr. J. R. HILL advocated it with all the official arguments.

Mr. PETER BOA thought the Bill was necessary for the preservation of the Society. He remarked, however, that there had been a certain want of straightforwardness in the promulgation of this Bill. It would be quite enough for the Society to say that the Bill was necessary on the grounds stated without taking so much trouble to show that there was not much difference between the Major and the Minor qualification, and that no interests were being sacrificed, because that was not the case. The men at present eligible for membership might regard that privilege as a right, and he thought they were perfectly justified in regarding it as such. Personally, he did not object to the Bill.

Mr. DOTT approved generally of the Bill, but asked, When they were going to Parliament would it not be just as well to accept one title and become a body of pharmaceutical chemists? He also thought it was rather a mistake to invent the title student-associate.

Mr. McLAREN demurred to the statement of Mr. Henry that the pharmaceutical chemist did not possess better knowledge than the ordinary chemist and druggist did.

Mr. HENRY said he made no such statement.

Mr. McLAREN said Mr. Henry's observation was that the pharmaceutical chemist was no better at carrying on the business than the ordinary pharmacist.

Mr. HENRY having replied to the comments,

The resolution was carried, Mr. Coull dissenting.

Mr. ANDERSON RUSSELL then called attention to the last sentence of the resolution, and moved the appointment of a representative committee to take the steps necessary to carry out the resolution by appealing directly to members of Parliament in their various districts.

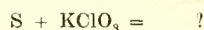
Mr. COATS asked if the resolution had been passed, because he intended to move an amendment against the term "student-associate."

The CHAIRMAN intimated that the resolution had been adopted.

Mr. HILL thought it would not be wise to appoint a committee of representatives at the meeting for the reason that they were all connected with local associations already, and such a committee would be crossing the lines of the organisations already in existence. Means were being taken to reach all members of Parliament and none would be omitted.

Mr. STORRAR said it might meet Mr. Russell's purpose if the meeting recommended every local association to appoint a small committee to look after the treatment of this Bill. If they let the Bill alone it would be best. What they had to do was to prevent petitions from being presented against the Bill.

The meeting then terminated.



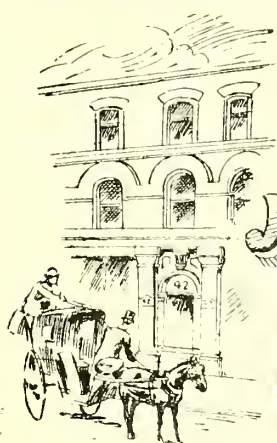
HAD started just to college, and thought he knew it all; For he was a "first-year man," and talked exceedingly "tall." But it chanced one day to happen, when left alone by himself, He tried to fill a prescription, and now he's on "the shelf." He took a Wedgewood mortar, and a little pestle too; He couldn't find the p. pot. chlor., so made the "crystals" do. It was pot. chlor. and sulphur; into the mortar they went, And then he started to triturate, this charming "first-year" gent.

Oh! somewhere in the city is a store without a door, With many a shattered window, and a grease-spot on the floor. In the churchyard there's a mound, where lies the "first-year's" dust;

This epitaph is on his tomb, "Sulphur and potash bust!"

Alumni Report (Philadelphia).

MR. WINTERBOTTOM: "Emily, the doctor says all we need for these colds of ours is whisky and quinine." Mrs. Winterbottom: "Cyrus, if you think you're going to get any whisky down my throat you are much mistaken." Mr. Winterbottom: "And I haven't a particle of faith in quinine. So I bought them in separate packages. Here's your quinine!"—*Chicago Tribune*.



OUR TOWN TRAVELLER

I journeyed by rail and cab to Battersea the other day to the Jenner Institute for Calf-lymph, 73 Church Road, S.W., to watch the

PROCESS OF INOCULATING A CALF,

and to look round the Institute. Mr. G. J. Marshall, received me heartily, and showed me over the premises. Everything about the place is kept scrupulously clean, lime-wash and white paint predominating, the object being to preserve aseptic conditions as much as possible. The procedure adopted may be thus described: A heifer-calf is bought in open market; the one our traveller saw was three months old. It is brought home, weighed, and its temperature taken. The object of weighing it is that it can be ascertained whether it thrives whilst dieted at the Institute, an important guide as to its healthfulness. The normal temperature of a calf, Mr. Marshall has found from some hundreds of observations to be 102.5°F . An injection of $\frac{1}{2}$ per cent. tuberculin is then made as a test for tuberculosis, any rise showing that the animal is tuberculous, which, of course, would lead to its instant rejection for this purpose. The animal is fed on sterilised milk and eggs, and sometimes oatmeal, an unlimited diet being allowed. Antiseptics are freely sprinkled about the yard and stables, mercuric-chloride solution being the particular kind used at the Jenner Institute. Instead of straw, pine-wood shavings (known in the trade as quinine-packing) is provided. There is a stove for warming the stable should the temperature fall below 54°F .: everything is done to make the animal comfortable and to induce it to thrive. The animal being found to be free from tubercular disease, and to have put on weight, is considered suitable to use for obtaining calf-lymph from. The operating-table is a special contrivance for the purpose, and on it the animal is strapped securely. The belly and thighs are shaved. The calf which I saw being operated on had very tough hair, that made shaving a longer job than usual. After shaving, the skin is rendered aseptic by washing with corrosive-sublimate solution, which in turn is washed off with clean hot water. The medical gentlemen, attired in white overalls, now commence vaccinating. The instruments used are sterilised by boiling in water for some time. The skin is skilfully scored all over by a scalpel, but not deep enough to draw blood, and into the ridges glycerinated lymph of good history is inserted by means of a quill. Minute records are kept of the different animals operated on, and the greatest care taken that doubtful lymph is not used. The operation of vaccinating the calf is somewhat tedious, but not painful, to the animal. It appeared in some parts to be tickled by the touch of the knife, but was wonderfully quiet the whole time. Sometimes they are rather troublesome, and despite their helplessness manage to deal out vigorous kicks to anyone in range. It takes from 100 to 120 hours before the vesicles are ripe for gathering the lymph, when the animal is again laid on the table, and the beads of lymph scraped off by a Volckmann's scoop and placed in small test tubes, and glycerine added. The calf is now slaughtered in the usual way, and its internal organs carefully examined. If found perfectly healthy, the lymph is passed as good.

"And what becomes of the veal?" I asked.

"Oh! it is sold in the market in the ordinary way. Why, in Berlin the flesh is actually preferred by some people, who willingly pay a higher price for it," replied Mr. Marshall.

The lymph is afterwards filled into the fine tubes familiar to the trade by capillary attraction, and kept in an ice-chamber till required.

"ROARER" FORMALDEHYDE TORCH.

Messrs. O. Berend & Co., Dunedin House, Basinghall Avenue, E.C., showed me their "Roarer" torch for disinfecting with formaldehyde. Wood-naphtha is placed in the body of the lamp, and started by burning a little methylated spirit in the saucer so as to heat the wick-tube. The naphtha-flame burns inside the upper tube, and gives off formaldehyde-gas, no flame escaping. If it is required to fumigate a small room one of the No. 30 size, having a capacity of 3 oz., will be sufficient; the lamp is lit, and allowed to burn itself out, the room, in the meantime, and for some time afterwards, being kept tightly closed. There are larger sizes for hospitals, or a small one may be burnt off for several successive charges, the rule being to allow 7 oz. of naphtha for every 25 cubic yards. The torches are sold through chemists, as well as the requisite naphtha.

A MEAL ON A FINGER-TIP.

I called on the Marvine Syndicate (Limited), 23 Eldon Street, E.C., to know how the Marvine geloids were taking with the public. It is only some three or four months since they were put on the market, but the manager told me that so great was the rush for them that it was deemed advisable to stop advertising until their works could be triplicated, and, that having been done, they are again able to supply any quantity. Marvine geloids are lozenges intended as a portable and concentrated nourishment for travellers and invalids. The formula was worked out by an eminent chemist, whose name I may not mention, who was very particular about the aseptic conditions to be observed in making them. These precautions enable the makers to dispense with the use of preservatives, and, from an examination since made, I am able to say the geloids are quite free from either boric or salicylic acid. The base of the lozenge is composed of fruit and vegetables concentrated, mixed with extract of beef (Armour's best yellow extract is used), cocoa, "Edme" malt-extract, and lime-juice. In addition to the nourishing and stimulating properties of these geloids, from their slight acidity they form admirable "thirst-quenchers," so that each box may be said to be a "portable restaurant." They are being much taken up by cyclists, who often experience difficulty in getting refreshments just when hunger makes itself felt.

"Postmen are particularly fond of them," said Mr. Marks; "in fact, we have had to write to the authorities, on account of the number of complaints that boxes sent by post never arrive, and our theory is that when a postman once tastes the geloids he positively can't stop till he has finished the whole box, and then, I suppose, he doesn't care to deliver an empty box."

The lozenges are certainly very nice, and dissolve readily in the mouth, the acidity promoting a pleasant flow of saliva. They are sold in 1s. and 2s. 9d. boxes.

SANOSE, ANUSOL, AND OREXIN TANNATE.

At Messrs. A. & M. Zimmermann's, 9 and 10 St. Mary-at-Hill, E.C., I was shown some new things the firm are introducing. One was sanose, a white powder consisting of a

combination of 80 per cent. casein with 20 per cent. albumose. Casein alone, when boiled with water, forms a sticky croutchouc-like mass, but combined with albumose a perfect emulsion results. Sanose is used as a means of adding albumen to foods prepared with flour, or added to bread to increase the albuminoid contents for patients in badly-nourished conditions.

Iodo-resorcin-sulphonate of bismuth, known shortly as anusol, is recommended for hæmorrhoids on account of its beneficial action on the intestinal mucous membrane. It is used in the form of suppositories administered in the evening, or, in severe cases, morning and evening. The following is the formula for anusol suppositories:—

Anusol.	...	...	...	gr. exij.
Zinci oxid.	...	...	...	gr. xc.
Bals. peru.	...	...	...	gr. xxij.
Ol. theobrom.	...	...	...	ʒv.
Ung. resine	...	...	...	ʒij.

M. Ft. sup. xij.

Mr. Zimmermann also called my attention to the use of orexine tannate in loss of appetite in catarrh of the stomach of children, due to incorrect feeding, and in adults. Bitters indicated in these cases are not beloved by children, and it is here that orexine tannate, practically without taste, comes in. It is administered in lozenge or powder form, the dose for a child of 3 to 12 years being 8 gr., given two hours before the midday and evening meal.

KENTS' LATEST.

I called in one day this week at Messrs. G. B. Kent & Sons' new place in Farringdon Road, E.C., and had a look round the showrooms. For size, neatness, and convenience of arrangement it would be hard to find such another showroom in the brush trade of this country. The samples exhibited range from ordinary house and stable requisites to the finest Japanese inlaid and tortoise-shell backed specimens of toilet-brushes. The wheel of fashion is still turning back in the direction of the Early-Victorian, and among the incidents of its advance—or retrogression—is a recrudescence in the demand for tortoise-shell goods. If this holds on for any length of time a tortoise-shell may become as rare as a buffalo-robe. Already, the price of the genuine article is advancing hand over hand, and with it, of course, the production of more or less successful imitations. I have no doubt the Messrs. Kent would rather sell genuine tortoise-shell goods than artificial ones, but the popular demand compels them to keep both, and I must say that I have never seen a better imitation than "tortoisine." Combs of this material are in growing demand. They are sold in two qualities, the thicker selling at from 11s. to 13s. per dozen, the thinner at 2s. less. Compared with the older and cruder pseudo-tortoiseshell, "tortoisine" is a distinct triumph of imitative ingenuity.

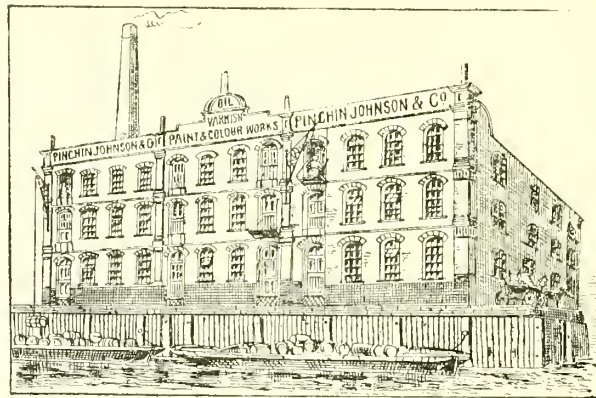
The "Effective" toothbrush is the latest novelty in that class of goods. Its distinguishing feature is that the bristles run zigzag fashion. It is made in two qualities, of three or four bunches of bristles in width, and in all degrees of hardness. It has but just been put on the market, and a strong demand is anticipated for it. Then there is the "Twice-a-day" nursery-toothbrush, consisting of a set of two neatly packed in ornamental box, one bearing a sun, another a crescent, for trade-mark, with the legends "Good morning," and "Good night." The "Tricho" is a small xylonite guard, which can be slipped over the brush to protect it. It is furnished with holes spelling its own name and that of its makers. Another brush again is furnished with a small brass hinge, which will keep it in a slanting position, convenient for dripping. One of the most curious showcases in the room is that which contains specimens of odd shapes of tooth and other brushes which have been submitted to the firm, or actually placed upon the market at one time or another, but have failed to find favour.

PINCHIN, JOHNSON & Co.'s NEW FACTORY.

Our representative was present at the opening of the new works of Pinchin, Johnson & Co., at Pinchin's Wharf, Ratcliff, E., on January 19. The premises occupy nearly an acre of ground by the side of the Thames. The main building is divided into three sections—(1) manufacturing, (2) oils,

and (3) drysaltery. There are, besides, smaller blocks of buildings devoted to varnish-making, laboratory, machinery, offices, &c. The manufacture of colours for paints is an interesting process. Chrome-yellow was being made at the time of our visit. The solutions of acetate of lead and chromate of potash were mixed in huge tanks, and the resulting precipitate drained and dried in hot-air chambers. On another floor our representative watched the putting-up of paint in the familiar lever-top tins. In the next department linseed oil was being refined. It is taken to the top-floor direct from the ships, by means of steam-hoists, and a quantity of 10 tons placed in a tank, sulphuric acid added and well mixed with a steam-stirrer; the acid is allowed to settle, and the oil run with water into boilers. Boiling finished, the water is separated, and the clear oil run into tanks for storing. In the varnish section spirit-varnishes were being made, solution of the various gums in spirit being made in large churns kept going by machinery.

All varnish-tins are supplied free, so that, using always new tins, no complaints on the score of dirty tins arise. The tins are stoppered with tin caps, no corks being used, thus saving the risk of getting dirt and pieces of cork in the varnish. Convenient square tins are mainly used for sending out the varnish—they pack better and go into less space than the old round kind. The conveniently fitted-up



laboratory forms an important part of these works. It is here that oils and chemicals are tested and investigations made, and the important matter of matching colours decided. Mr. Wimple, the chemist who presides over this department, decides on the quantities of the different colours to use on the larger scale to make different shades. Label-printing is done on the premises, customers' names being placed on tins, &c., when required. Every effort seems to be made to meet customers in style of packing as well as price.

"We can make a white paint at any price, but it wouldn't be pure lead at the low price," said Mr. Pinchin. "Customers may know they are getting only the best goods when they bear 'Cat's Head' trade-mark."

THE MODERN WEST-END.

Whenever I find myself in the serene atmosphere of Kensington, I am always tempted to look in at Mr. Albert Cooper's pharmacy in the Gloucester Road. He is sure to hear there something about the latest medicine ideas in the fashionable world. A half-mile radius from Mr. Cooper's establishment would mark out perhaps the richest circle in the world, so that it is no wonder that his business should have become the stylish one it is. And Mr. Cooper has catered for that clientèle in such a way as to command success. He has always gone on the principle of going to the utmost expense, especially in the dispensing-department, so as to provide the most perfect service which doctor or patient can require. On my visit last week Mr. Cooper took me to some premises behind his pharmacy, which he has lately converted into a model aerated-water factory. He is putting up syphons only, and though he quotes two prices for these he tells us that fully nine-tenths of his trade is in the higher-priced ones. For these distilled water only is used, and the syphons are made with the patent porcelain-lined tubes and silverplated tops. The plant has been specially

constructed and adapted to the premises. The distillation of water is continuous, a large quantity being requisitioned for the pharmacy. In the short time that Messrs. Cooper & Co. have manufactured aerated waters we were told their trade in them had nearly doubled. They have lately patented a new kind of medicinal water which they will soon be ready to announce.

ABOUT WEST-INDIAN SPONGES.

I had a talk with Mr. Cresswell the other day about West Indian sponges, and in regard to the origin of

sponges are found in very shallow water—from three to six fathoms deep—and are fished up with poles provided with grappling irons. The fishing is carried on by small schooners, mostly manned by negroes. Fishing goes on almost all the year round, and, after being aired on deck for a couple of days to get rid of decomposing vegetable matter, the sponges are thrown into a "kraal," a kind of stockade-work in the water some 8 or 10 feet square. The illustration given below shows these kraals. The outer skin of the sponge is next removed, the sponge bruised with a stick, strung up, and stowed away. The second illustration



which I was told that it is held by some of the highest authorities that the Mediterranean sponge is a descendant of the Caribbean, and had probably floated across in some seaweed-drift. The Cuban sponges are in constant demand for the "cheap" trade, but one very rarely finds a Cuban sponge at once soft and durable. So far the trade has not been much affected by the political troubles of the island. The coast of Florida yields a "sheep-wool" sponge which is a special favourite in the United

shows a sponge-boat discharging her cargo. "The coast of British Honduras," said Mr. Cresswell, in conclusion of his lecture (he is an enthusiast on this subject, by the way, and his library takes the cake—the sponge-cake—among private collections of this department of science), "yields some sponge of a mediocre character. Some Greek fishermen we sent out to teach the Hondurans how to fish have just returned. They report that although sponge-fishing is likely to become a permanent industry in the Colony it will



States, but has never obtained a footing in this country save as a "carriage-sponge." But quite lately the Florida reefs have begun to yield an excellent cup-sponge, which is very suitable for the European market. It is much too large to be used entire, though a few specimens are bleached and sent out for show purposes; but it cuts up nicely, one cup yielding three or four medium-sized sponges. The Florida reefs are divided into three "stretches" running from Apalachee Bay down to the south, and varying in width from 5 to 15 miles. The

never be a first-class one, as the current is too strong and the sponges not of the best quality.

A NEW MOVE IN SPONGES.

At Cresswell Brothers & Schmitz's warehouse in Red Lion Square I found a fine assortment of sponges awaiting inspection. Hitherto Turkey sponge has been sent out to the firm's customers in cases or in paper parcels, according to the size of the order. But a change is about to be made in this plan which will be welcomed by all chemists who

like to handle a neatly-put-up article. For the firm now put up their Turkey cup-sponges in handsome boxes covered with bright coloured paper. Most of the boxes contain a dozen sponges, each one neatly placed in a separate pigeon-hole, but some of the larger size are in half-dozen boxes. Fine Turkey cup-sponges are steadily advancing in price, because the demand is growing, while the sponge has to be fished for at greater depths than before. On the other hand, the "solid" Turkey sponges are being harvested in greater quantity than formerly, and small sizes have become exceptionally plentiful of late. Much of this supply comes from Pantalaria, which was formerly considered an unlikely place to yield any, being far to the west of the usual fishing-grounds. The solid Turkey sponges are much cheaper than the cups, for, while the price of the last-named, as put up in boxes by Messrs. Cresswell, ranges from 1s. to 8s. 6d. each (although a threepenny size can be had if ordered), the Turkey "solids" go from 6s. apiece down to 1d. The last-named are put up in boxes of four dozen.

Commercial Notes.

DRY PAINTS.

A New York report states that importations into U.S.A. of earth-paints and chemical colours are growing less each year, and agents who formally depended almost entirely upon the New York market have been forced to seek South American trade. Dry colours have been replaced by moist and mixed paints, and South America will soon see the advantage of these goods. United States manufacturers are to try to capture the market for these.

PLATINUM-PRODUCTION.

The principal districts in the Ural Mountain region at which platinum is produced are Bogolawsk, Miask, and Newjansk. The only other parts of the world where the precious metal is found are in South America, Borneo, and Australia. A recent report (quoted by the *Apotheker Zeitung*) states that the production in Russia has increased from 2,946 kilos. in 1880 to 4,413 in 1895. The production in other parts of the world amounts to 100 kilos. annually. Platinum ore contains from 57 to 86 per cent. of the pure metal, and the price averages 900m. per kilo.; the pure metal is worth 1,400m. per kilo. [1 kilo. = 2 lbs. 3 oz.; 1m. = $1\frac{1}{4}$ d.]

FISH OILS.

Mr. F. G. Brückner, of Hamburg, has published a statement regarding the supply of fish oils, other than cod liver oil, during 1897. During the season 59,200,000 torsk were caught on the Norwegian coast, and they yielded 34,035 hectolitres (1 hectol. = 22 gals.) of steam oil, and 37,040 hectolitres of liver and raw oils—figures greatly in excess of previous years. The yield of Newfoundland seal-fishing was only 2,736 tons of blubber, while the Greenland fishings gave 15,200 tons. The Japanese yield of fish oils was better than in 1896, but still below the average. The following are the figures for the past five years:—

—	1897	1896	1895	1894	1893	—
Sweden,						
Norway	13,188	10,004	11,923	15,100	22,594	tons
Denmark...	21,950	14,814	20,690	27,037	24,235	barrels
Archangel	—	81	689	—	1,099	"
New-						
foundland						
and other						
countries						
excluding						
Japan ...	12,015	14,794	15,405	8,152	7,211	"
Japan ...	89,077	75,483	104,569	155,514	110,333	chests
Totals in						
kilo-cent-						
ners ...	100,520	88,400	114,000	121,000	115,038	

JAPANESE TRADE WITH U.S.A.

The following figures relate to the value of the exports and imports of goods interesting to the drug-trade between Japan and the United States during 1896 and 1894. The values are expressed in Japanese silver yen, equivalent to about 50c. in American money, or 2s. 1d. sterling:—

Japanese Exports.

	1896	1894
Antimony	3,595	21,583
Camphor, crude	127,755	292,879
Camphor oil	13,563	14,184
Ginger	18,461	3,004
Menthol, crystals	50,745	27,844
Peppermint oil	95	190
Sulphur	267,728	187,266

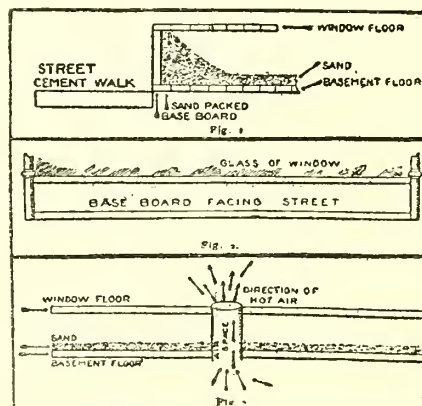
Japanese Imports.

	1896	1894
Saheylic acid... ..	2,433	—
Condensed milk	110,372	89,657
Photographic instruments	9,277	8,501
Kerosene oil	5,282,909	4,079,352
Quicksilver	30,315	21,327

Among the foreigners now in business in Japan, Germans predominate, the British come second, and the Americans third. The German representatives outnumber the two latter countries by about two to one.

Steamy Windows.

IN the American *Journal of Window-dressing*, Mr. A. E. Friant, an expert at window-dressing, gives the result of a study he has made on the subject of window-sweating. The conclusion he arrives at is that window-sweating is entirely due to imperfect ventilation, and his remedy practically amounts to a more perfect system of air-circulation. The annexed sketch shows the method he uses of making an air-shaft from the basement to the window, so that warm



air from the basement would cause a circulation by reason of the air in the window being cooler. The plan works very well if a lamp is placed beneath the air-chamber in cases where the basement is not heated. A depth of 3 inches of sand is placed beneath the window-floor to obviate as much as possible any tendency to dampness, and all cracks in the window-floor must be tightly caulked to keep out cold air.

Trade Reports.

Notice to Retail Buyers.

It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk.

In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable even for manufacturing purposes.

Further points which should be borne in mind are that the distributor generally has to bear the bulk of the freight-charges on the goods on their way from the producer to the retailer, and that for many articles the range of quality is very wide.

This report deals with market movements up to Wednesday night. Later intelligence will be found in the Coloured Supplement.

42 CANNON STREET, E.C., January 26.

IN Crude Drugs there are few alterations to report. Asafoetida has sold at lower prices. All balsams are well held, especially tolu and Peru. At the London cinchona-sales slightly better prices were realised. Bachu and cardamoms steady. Crude camphor is quiet, though higher prices are cabled from Japan. Cascara sagrada firm at previous rates. Calumba is scarce; cod-liver oil dull of sale. Ipecacuanha firmly held both for Rio and Cartagena. Orris is quiet but steady at unchanged rates, and the same may be said of opium. Vanilla firm.

In Essential oils, oil of sweet-orange is becoming firmer owing to increased business both at home and abroad. Lemon and bergamot are unchanged at previous rates. American oil of peppermint is slightly firmer again this week; so is cassia. The position of lemongrass oil is uncertain, lower prices being quoted by some holders, while others are firm in their views.

In Fine Chemicals cocaine is in slightly better request. Tartaric and citric acids are unchanged at previous rates. Cream of tartar firm. Quinine also shows a firm market, but business is difficult to effect. Quicksilver steady at the recent advance.

In Heavy Chemicals sulphates of copper and ammonia have been further advanced. Sulphur scarce, with a firm tendency; bicarbonate of soda and alkali are lower for export. Bleaching-powder steady. Caustic soda slightly firmer. Aniline oil and salt very low in price. Chlorates of potash and soda are also on the decline.

At the Spic-sales to-day pepper was quiet, although privately a firm tone prevails. Pimento and mace were also firmly held. Ginger, nutmegs, cloves, and chillies quiet and dull of sale. The position of cloves is interesting and the tendency upwards.

Linseed oil is firm, and the same may be said of rape. Cotton, cocoanut, palm, and olive oils are all quiet but steady. Turpentine is firm, at 24s. 3d. to 24s. 4½d. per cwt. on the spot for American; while petroleum is dull, American offering at 4½d. to 4¾d. per gallon on the spot.

The feature of the spice market this month has been the extensive speculation in Zanzibar cloves, and a rapid rise in the price of the article. It was well known that a large "bear" account was open for January-March delivery; but, as the tenders were heavy, this had little effect on the market until it was clearly evident that the "bears" were still short, and that they were buying spot cloves with which to fulfil their delivery contracts. This stiffened the market, and prepared the way for the rise in price, which began on the Continent buying

here for shipment, and continued when information confirming the shortness of the crop came to hand from Zanzibar. Most of the holders of actual cloves have a great belief in the market, and cling tenaciously to their stocks, looking for much higher prices, although there has been already a rise this year of ½d. per lb.

Some time ago we announced that the United Alkali Co (Limited) had secured ground in the neighbourhood of Detroit whereupon to build an alkali factory. The British Alkali matter is now taking definite shape, and Mr. Martin J. Hammill, formerly manager of the Kurtz's Chemical Works, St. Helens, has sailed for America to superintend the factory. Dr. Hurter and Mr. Duff, the company's chief engineer, have been in America for some time making inquiries, and it is proposed to form an American syndicate to finance the concern. Mr. Hammill has been in the alkali trade all his life, starting with the Widnes Alkali Company as chemist, along with Mr. Wilde, the Alkali Union's general manager.

M. Ménier, President of the Syndical Chamber of chocolate-manufacturers, &c., in Paris, has received from the Minister of Commerce a reply to the petition made by the Chamber some months ago, to obtain a drawback on cocoa-butter equivalent to the one given on unsweetened ground cocoa, viz. 130 francs per 100 kilos. The Minister states that it would require a special Act of Parliament to obtain the drawback, and that the product is not of sufficient importance for a new law. The Syndical Chamber is not satisfied with this reply, and M. Ménier is to still further urge the matter. The exportation of cocoa-butter from France is very small in consequence of the high Customs duty, and the chocolate manufacturers wish to be placed on an equal footing with their foreign competitors, Holland and Britain, whence considerable quantities are exported.

ACID (CITRIC).—Is without change at 1s. 0¼d. per lb. on the spot. Concentrated Lemon-juice for prompt and future shipment is offered at 10l. 5s. per pipe f.o.b. Messina.

ACID (TARTARIC).—Is firmly held at 1s. 0¼d. per lb. for foreign crystals, and 1s. 1d. for English B.P.

ALOES.—Cape.—Privately business has been done at 23s. per cwt. this week for good hard bright, which marks a slight advance on the recent auction rates. There are no sales to report in Zanzibar. Curaçoa.—At auction last week ordinary to good livery in gourds realised from 25s. 6d. to 46s. per cwt., and not 75s. as we reported. The Gaika from Mossel Bay has brought 57 packages Cape.

ASAFOETIDA.—The chief holder is disposed to accept lower prices this week, and business has been done at slightly lower rates than the limits at which the drug was bought in at auction.

BALSAM COPAIBA.—Good genuine Maranhão copaiba is offered at 2s. 2d. per lb. on the spot.

BALSAM PERU.—Is firmly held for 8s. 6d. to 8s. 9d. per lb. on the spot for good genuine quality. Arrivals have been scarce for some time, and there is very little stock here.

BALSAM TOLU.—Is slightly firmer this week, and in small supply. Business has been done at 2s. to 2s. 2d. per lb. on the spot, according to quantity taken.

BENZOIN.—The arrivals this week include 137 cases from Singapore, and 115 cases from Penang per Formosa. These arrivals include fine quality of Siam and Sumatra, which will be offered at next week's drug-auctions.

BISMUTH.—Bismuth has been found on the Samosir peninsula, near lake Toba, in the island of Sumatra, Dutch Indies. Its existence has long been known to the natives, who have collected it as it is carried down by the waters of a small stream opening into the lake, but they have not been able to trace its source. Some years ago the Dutch Indian Government sent out a mining engineer to ascertain the whereabouts of the deposit, but he also was unsuccessful. Probably further explorations would have been made ere

now but for the fact that the district is on the territory of the semi-independent and entirely savage Batak tribes.

BUCHU.—The market is steady, but no business has transpired since the drug-auctions. Long narrow leaves are offered at 3*d.* to 5*d.* per lb. according to quality.

CALUMBA is very scarce, and fair bids have been made for parcels withdrawn at the last auctions. For two parcels fine and picked London washed root, 60*s.* and 75*s.* per cwt. respectively is asked. Natural root is scarcely offering at all.

CAMPHOR (CRUDE).—The London market remains quiet. Quotations from Japan are firm, as much as 94*s.* being asked for January–March steamer shipments, c.i.f. terms. China is offered at 83*s.* per cwt., c.i.f. terms.

CAMPHOR (REFINED).—Is quiet on the spot at 1*s.* 2½*d.* per lb.

CARDAMOMS.—A steady market. Several transactions in fair Ceylon-Malabar kinds are reported to have been made since the auctions at from 2*s.* 9*d.* to 3*s.* per lb. The arrivals seem to have stopped for the time being.

CASCARA SAGRADA.—There is no change to report in the quotations, new bark being still offered at 20*s.* to 21*s.* on the spot, with little business. The *Rajore* from San Francisco has brought 212 sacks.

CINCHONA.—Further particulars with regard to the Amsterdam cinchona sales of last Thursday show that of the bark offered on that occasion over 90 per cent. consisted of Ledgeriana. The richest lot offered in sale was one of 31 bales of crushed Ledgeriana from the plantation Gamboeng. This contained the equivalent of 9.90 per cent. of sulphate of quinine, and sold at 61*c.* per half-kilo. The average unit, as already stated, was 6.90*c.* per half-kilo., but 7,454 kilos. of quinine in the bark realised the rate of 7*c.*, 699 kilos. at that of 7½*c.*, and 621 kilos. at that of 7¾*c.* per half-kilo. On the other hand, 518 kilos. sold at as low a unit as 5¾*c.*, which was the lowest figure accepted. Two-fifths of the total supplied, which was bought in, is held above the average limit obtained at the sales. Very little druggists' bark was offered, and the demand was slack, although a few fine lots found buyers at high prices. At the auctions in London on Tuesday the fairly moderate supply of 3,460 packages offered, and a large proportion sold, with good competition, at rather above the last Amsterdam sale rates, the average unit obtained being 1¼*d.* to 1½*d.*, against 1¼*d.* to 1¾*d.* at the last London auction rate. The offerings consisted of—

	Packages		Packages
East Indian cinchona ...	1,361	of which	853 were sold
African cinchona... ..	843	"	618 "
South American cinchona	802	"	156 "
Ceylon cinchona... ..	237	"	229 "
Java cinchona	217	"	177 "
Total	3,460		2,033

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works	154,308
Agents for the American and Italian works ...	78,494
Agents for the Brunswick factory... ..	75,685
Agents for the Auerbach factory	58,304
Messrs. Howards & Sons	36,299
Agents for the Imperial Quinine Company ...	29,200
Total quantity sold	432,290
Bought in or withdrawn	268,009
Total quantity offered	700,299

The following prices were obtained:—

CEYLON.—*Red bark*: Original chips, ordinary dust to fair clean stem, 2¼*d.* to 4½*d.*; middling to fair quill, 3¼*d.* to 3¾*d.*; renewed chips and shavings, ordinary part dusty and dull, 3¾*d.* to 3¾*d.*; one lot brought 9*d.* per lb. *Officinalis*: Original chips, ordinary, 3¼*d.*, to partly quilly and shavings 4½*d.* per lb. *Hybrid*: Original chips, small to bold mixed, 4½*d.* per lb.

EAST INDIAN: About 200 bales were withdrawn before the sale, the brokers having received instructions to hold for

higher limits. *Succirubra*: Fair to good rich stem chips and shavings, 4*d.* to 5½*d.*; renewed ditto, 4*d.* to 5*d.*; good root, 4*d.*; common quill, 3¼*d.* per lb. *Officinalis*: Natural stem chips, 3¼*d.* to 3¾*d.*; renewed chips and shavings, fair to good, 3¾*d.* to 5½*d.* per lb.; good root, 4¾*d.* per lb. *Ledgeriana*: Renewed chips and shavings, 5¾*d.*; original ditto, 5½*d.* to 5¾*d.* per lb.; good broken quill and chips, 7*d.*; fair to part quilly branch, 4½*d.* to 4¾*d.* per lb.

JAVA.—Good *Ledger* stem chips realised 6¼*d.* to 7½*d.* per lb.; dark and dusty original chips, 2¾*d.* to 2½*d.*; broken quill and chips, 4¼*d.*; and root, 4½*d.* per lb.

AFRICAN.—Fair to good even quill brought 4¾*d.* to 6½*d.* per lb.; broken quill at 5½*d.* per lb.

SOUTH AMERICAN was mostly bought in. About 200 bales *Bolivian calisaya* were sold; good rich cultivated quill at 8*d.* to 9½*d.* per lb.; flat, country damaged, 7½*d.* to 10½*d.* per lb. *Pitayo*: 37 bales sold at 2*d.* to 2¾*d.* per lb. *Carthagena*: 19 bales were bought in at 7*d.* per lb. for stout and split quill, a bid of 5¼*d.* being refused.

COCAINE.—There has been a somewhat better demand lately. The manufacturers quote from 10*s.* to 10*s.* 6*d.* per oz., according to brand; but second-hand holders have been making sales at 9*s.* 9*d.* per oz. lately.

CREAM OF TARTAR.—Steady. Good white French crystals are offered at 73*s.* per cwt. net cash, f.o.b. terms, Bordeaux. On the spot the same quality is obtainable at 75*s.* 6*d.*, and powder at 77*s.* 6*d.* to 79*s.* per cwt.

CUBEES.—Small sales are reported this week at from 40*s.* to 42*s.* 6*d.* per cwt. for good sifted berries, but there are few buyers at these prices.

GALLS.—Persian are easier. A small business continues to be done in blue at late rates, holders showing more readiness to meet buyers. The current quotations for Persian are as follows:—Blue, 50*s.* to 56*s.*; green, 45*s.* to 50*s.*; white, 40*s.* to 43*s.*; sorts, 5½*s.* to 52*s.* 6*d.* per cwt. Chinese galls are very quiet.

GLYCERINE.—The Continental manufacturers appear to be very well supplied with orders, and are not inclined to push business at the current rates of double-distilled glycerine. The market may be described as firm, but unaltered in price.

GUM ACACIA.—Fairly extensive public sales will be held on Thursday. Sudan sorts are rather easier.

HONEY.—The large arrival of 1,026 cases from San Francisco per *Rajore* is reported.

IODINE.—There has been no break in the official price yet, but it may come any hour. The situation is briefly this:—An influential ex-member of the convention has withdrawn from it, or is about to do so. He has a fair-sized parcel of iodine in London and probably some on the Continent also. He threatens to break the market with this. The syndicate are trying to patch up a truce with him, but had not succeeded in doing so this afternoon. If the discussions now going on between the parties lead to a result, there will be no break in the market; in the other case it is impossible to say how low iodine will fall, for any action on the part of the seceder will provoke retaliation by the syndicate. There is also some doubt whether it would be at all easy to sell "outside" iodine in the market as no falling clause guarantee would be given with such a parcel.

IPBCACUANHA is firmly held at the last auction rates. It is said that 7*s.* 9*d.* per lb. has been refused this week for ordinary to good natural Rio root, 8*s.* to 8*s.* 3*d.* being the limit. Picked root cannot be had under 8*s.* 9*d.* to 9*s.* per lb. For Cartagena root of good quality 6*s.* per lb. has been paid. There have been no arrivals lately.

JUNIPER BERRIES.—The *Nautilus* from Rotterdam has brought 140 bags.

KOLA.—Sales are reported from Liverpool at 2*d.* per lb for ordinary dried African nuts.

MANNA.—Flake is offered at 2*s.* 1*d.* per lb. in 20-lb. boxes, f.o.b.; usual boxes, 1*s.* 8*d.*; superfine 10*d.*; and sorts, 6*d.* per lb., f.o.b. terms.

MENTHOL.—A dull market at 7*s.* 3*d.* per lb. on the spot for good dry crystals.

OIL (COD LIVER).—No fishing has yet begun at Lofoten,

but the telegraph stations in the district are about to be opened, and the Government Inspector who collects the official fishing statistics has arrived. The fishing in the "outside" districts of Sengen has been proceeding for some time, but on the whole the season is rather late this year. It is expected that prices will open fairly high. Up to the present they are more or less nominal. We hear of quotations this week at 60s. per barrel on the spot for best non-freezing old oil, though some holders still ask 65s. per barrel. The London market is very flat. Our Bergen correspondent writes, on January 22, that continually stormy weather has greatly interfered with the fishing in the northern parts, and reports are meagre. It is difficult to give a quotation for best *Lofoten* old oil, as there are no buyers. The exports from Bergen up to date have been 529 barrels against 228 barrels at the corresponding period of last year.

OILS (ESSENTIAL).—American *Oil of peppermint* appears to show signs of firming up a little. It is doubtful whether 5s. 6d. per lb. would still be accepted for HGH oil on the spot. Bids of 5s. 3d. to 5s. 4½d. have been refused this week. The position of *Lemon grass oil* is very uncertain. It seems pretty clear that one large firm of importers are oversold for January delivery, and are trying to "bear" the market, which appears to be naturally very strong. There are moreover, several adulterated parcels on the market, and it is therefore difficult to give quotations. We hear that good oil has been sold at 10d. to 11d. per oz. on the spot, but some brokers quote 6d. to 7d. per oz. for quality which they describe as "all right" and of direct import. For January-March shipment, 5½d. per oz., c.i.f., is a quotation. There is a report that about 500 cases of lemongrass or citronella, or both, have been destroyed in the *Clan MacKinnon*, which is said to have been burnt in the Suez Canal, but such reports should be accepted with caution. *Citronella oil* is quoted at 1s. 2½d. to 1s. 3d. per lb. for drums on the spot, and at 1s. 1¼d., perhaps, 1s. 1½d., per lb., c.i.f. There is a somewhat firmer feeling in *Cassia oil*, but prices show no change. It is said that 150 cases of cassia and star-anise oil, on the way from China to New York in the *Cromarty*, have been lost at sea. Should that report be confirmed, it may occasion a slight rise. *Oil of star-anise* is offered at 7s. 3d. per lb. on the spot, but there is no business to report. *Sicilian essences*: Advertisements from Messina dated January 19 state that all essences are firmly held and not likely to be lower. Stormy weather has lately prevailed in the growing-districts. *Oil of lemon* is offered at 3s. 4d. per lb., f.o.b. terms. *Oil of bergamot* is firm at 7s. 3d. per lb., f.o.b. terms, prompt shipment, for finest quality. The crop is said to be only about two-thirds that of last season. When the new season opened there was very little of the old stock left, and there is no prospect of lower prices. *Oil of sweet orange*: Reports from Messina state that there is a good local demand, probably on account of business done earlier in the season. It is difficult to say whether the article will go to famine prices. To-day's price for finest quality is 7s. 6d. per lb. f.o.b. terms, but is not likely to remain long at this figure. *Cinnamon oil*: At auction to-day, 66 cases of ordinary quality ex *Karachi Maru* sold, without reserve, from 2¼d. to 3¾d. per oz. for apparently sound, and at 1¾d. to 2¼d. per oz. for water-damaged.

OIL, EUCALYPTUS.—Six cases of the *Piatypus* brand were offered at auction last week, but were bought in, 2s. 3d. per lb. being stated as the price. We understand that the best brands of eucalyptus oil are in somewhat poor supply, and prices have lately stiffened.

OPIUM.—The London market is quiet for all grades, and very little business has transpired, though all grades are firmly held. Buyers refuse to increase their limits, and any bids that are made have to be submitted to the consignee. In Persian, prices are nominally 10s. 3d. to 10s. 6d. per lb. for finest, and 9s. 3d. to 10s. per lb. for ordinary to good. Some Turkish *Druggists'* opium has been sold lately at 8s. 6d. per lb., showing a steady price, and in Smyrna a few cases are said to have changed hands at an advance of 1d. per lb. Our Smyrna correspondent writes, under date of January 14, that the market is very quiet, no sales having taken place during the week. Several small orders for Yerli and choice

Karahissar cannot be filled, as buyers required a slight reduction on the last prices paid, while holders ask an advance. Reports from the interior state that rains have set in, but up to the present they have not interfered with the state of the crops. The arrivals are 3 203 cases, against 2,090 cases in 1897. The position in Constantinople is analogous to the one at Smyrna.

ORRIS is steady at unchanged rates. Extra picked Florentine root may be had at 40s., picked at 37s., and sorts at 35s. per cwt., c.i.f. terms. Verona is unchanged at 20s. to 23s. per cwt. according to quality.

PISTACHIO-NUTS.—Business has been done this week at from 2s. 4d. to 2s. 8d. per lb., f.o.b. terms, according to quality.

QUICKSILVER.—Steady at 7l. per bottle in first hands, and 1s. to 1s. 6d. less in second hands.

QUININE.—Previous to the London bark-auctions two of the German manufacturers received bids at 1s. 1d. per oz. for parcels of 10,000 and 50,000 oz. of bulk quinine respectively, but they refused to sell. The market keeps very firm, but we have not heard of any actual business. Makers' prices are as follows: Howards & Sons, 1s. 3d. in tins, 1s. 5d. in 1-oz. vials; Whiffen, 1s. 2d. in tins, 1s. 4d. in 1-oz. vials; Brunswick, 1s. 1d.; Mannheim, 1s. 1d.; Auerbach, 1s. 1d.; Zimmer or Jobst, 1s. 1d.; Taillandier, 1s. 3d.; and Amsterdam, 1s. 1d. per oz.

RHUBARB.—Small sales are being made at steady prices; medium round *Canton*, 1s. 3½d.; fair *High Dried*, 1s. 1d.; and medium round *Stensi*, 2s. 6d. per cwt.

SANTONIN.—Two of the principal manufacturers have for some time been selling at convention-rates, their lowest figure being 5s. 4½d. per lb. for 3 cwt. lots. The two other manufacturers, who have hitherto had a free hand, now appear to have joined the convention fold, and are quoting the official rates, but they are allowed to sell 2-cwt. lots at the minimum price instead of 3-cwt. lots. This is naturally a source of some dissatisfaction to the agents for the other makers.

SARSAPARILLA.—After the rather surprisingly good result of the last auctions, the market has remained extremely firm. For a small parcel of good *Lima-Jamaica* root 1s. 5d. per lb. is wanted. *Guayaquil* root has been sold up to 1s. 4d. per lb., and there would be further buyers at this figure if anything were to be had. For good grey *Jamaica* root from 1s. 10d to 1s. 11d. per lb. is asked.

SENEGA has been more inquired for this week, and quotations range from 1s. 2d. to 1s. 3d. for good quality. In one quarter as much as 1s. 4d. per lb. is asked for fine root.

SHELLAC.—There has been a moderate demand since our last report, and second orange and button have been sold at full to dearer rates for the latter description. No auctions have been held this week. Second orange quotes at 63s. per cwt. for fair TN. Blokey AC garnet is quiet at 73s. The market for arrival has been quiet owing to the holidays in Calcutta, and no business is reported in second orange. There are sellers of TN, April-June steamer-shipment, at 68s. 6d. per cwt. AC garnet for February-April steamer has been sold at 69s. 6d., c.i.f. terms.

SPICES.—The public sales of the last two weeks have been small, and of little interest. Privately a good business has been done. *Black pepper* shows a sharp rise, 4½d. per lb. being paid for January-March shipment. *Zanzibar cloves* dearer, and business done at 3½d. per lb. for March-May delivery, and 3¼d. for June-August. *Cassia-lignea* also dearer, 49s. per cwt., being now the price for old import. *Pimento* firm; 5d. per lb. has been paid for fair. *Ginger* and *Chillies* show no change.

TRAGACANTH.—The lower grades have been in slightly better demand this week, but with the poor selection offered the transactions are not very large, the demand being for gum up to 6l. 10s. per cwt. Quotations are from 13l. to 13l. 10s. for firsts, 11l. 5s. to 12l. for seconds, 10l. to 11l. for thirds, and 8l. to 9l. 10s. per cwt. for fourths. Business in Persian insoluble gum has been fairly brisk for sorts, but picked and selected gum is scarce. Fine picked is offered at 24s. to 26s., reddish 20s. to 22s., and fair to fine sorts at 16s. to 21s. per cwt.

VANILLA is firmly held. Practically all the vanilla sold at auction has gone now into consumption. It is said that the Seychelles crop is now almost exhausted, so that the article is not likely to go lower.

WAX (CARNAUBA).—Business is said to have been done in Liverpool this week at 41s. per cwt. for good grey.

WAX (JAPAN) remains dull of sale. Good pale squares are quoted at 36s. per cwt. on the spot, and January-February steamer-shipment at 32s. per cwt. c.i.f. terms.

Heavy Chemicals.

The heavy-chemical market remains pretty much in the same condition as at the date of last writing, and, taking all things into consideration, a fairly good tone is apparent. Business is a little better, and inquiries for spring shipment are commencing to come in. The main features to be noted are further advances in *Sulphate of copper* and *Sulphate of ammonia*, and a heavier demand for *Smith Durham salt*, particularly for shipment to India. For the Australian market prices for *Bicarbonate of soda* and *Alkali* are 10s. per ton lower. *Soda crystals* are in heavier demand. *Sulphur* keeps very scarce. *Brown acetate of lime* has advanced still further, and there is every prospect of such movement continuing. *Bleaching-powder* is steady. *Caustic soda* slightly firmer. *Aniline oil* and *salt* are exceptionally low, and, we should say, about as low as they ever have been; the former stands at 5d. to 5½d. per lb., and the latter at 5d. per lb. *Sulphate of copper*, 16l. 5s.; *Anchor*, 17l. 10s., and good business being done. *Sulphate of ammonia* firm: *Beckton*, 10l. 5s.; *Beckton*, terms prompt, 10l. 2s. 6d.; *Hull*, *Liverpool*, *London* and *Leith*, 10l. 2s. 6d. Exports from *Leith* last week amounted to 823 tons. *Benzols* are very quiet; 90 per cent., 1s. 3d. to 1s. 3½d., and 50 per cent., 1s. 5d. *Brown acetate of lime*, 6l. 7s. 6d. to 6l. 10s. c.i.f. *Chlorates of potash* and *soda* have a declining tendency.

Hamburg Drug-market.

Our Hamburg correspondent writes on January 24:—Business is quiet, and there is little of it. *Agar agar* is quiet at 260m. per 100 kilos. *Balsam Peru* is firm and scarce at 19m. to 19½m. per kilo.; while *Balsam tolu* is easier at 350m. per 100 kilos. *Borax* is very quiet at 28m. to 29m. per 100 kilos. *Campher* (refined) is quiet; to-day there were second-hand sellers at 247½m. per 100 kilos. *Citric acid* is dull at 228m. per 100 kilos. *Cloves* are advancing, and quoted to-day at 64m. to 65m. per 100 kilos. *Cassia lignea* remains firm, new crop at 79m. to 80m. per 100 kilos. *Cascara sagrada* is better, and 35m. per 100 kilos. is demanded. *Cantharides* (Russian) unchanged at 325m. to 340m. per 100 kilos. *Ergot of rye*: a lot of 31 bags arrived from the Black Sea, which may be had at 160m. to 165m. per 100 kilos. *Iodine*: there is a report that a large manufacturer in South America intends to work outside the convention. *Menthol* is steady at 15½m. per kilo. *Opium* is a little firmer at 18m. per kilo. Higher prices for *Quilla bark*, spot delivery, are still demanded, while forward delivery can be bought at about 30½m. per 100 kilos. Secondhand holders of *Cocaine* seem inclined to sell out at 320m. per lilo. *Quinine* has not advanced, as it was expected, to-day's quotation is 35½m. to 36m. per kilo. *Pimento* is very firm, and still advancing at 8m. per 100 kilos. *Cevadilla-seed* is quiet, 100m. per 100 kilos. will buy to-day. *Cod-liver oil* is quiet, non-congealing oil for spot delivery 66m. per barrel. *Caster oil* is quiet and slow of sale at 60m. per 100 kilos. for spot delivery, and 56m. forward for first pressing, 7 banel. *Oils (essential)*. Russian anise oil is firm at 16m. per kilo. *Peppermint oil* quiet: HIGH, 5½m. per lb. Japan oil, 6m. 60pf to 6m. 75pf. per kilo. *Star-anise oil* steady at 15½m. to 15¾m. per kilo. *Citronella oil* firmer at 270m. to 275m. per 100 kilos. *Caraway oil* very firm at 7m. 80pf. per kilo. *Cajuput oil* quiet at 100m. per case.

The Hamburg American Steamship Company has made a contract for five large transatlantic steamers for her China-line with the Hamburg shipbuilding-yards.

SILVER sulphocarbonate, recommended as antiseptic, has been prepared by double decomposition between silver carbonate and sulphocarbolic acid. It occurs as white prismatic needles, sensitive to light.

Heavy Chemicals, Colours, &c.

THE following are the current wholesale market quotations of heavy chemicals, coal-tar products, and colours not specially enumerated in other parts of the Trade-report:—

	£	s.	d.
ACID—Picric, crystals per lb.	0	0	11
† ALUM—Crystals, in casks per ton	4	15	0
ALUMINA—			
Carbonate per cwt.	1	17	6
Hydrate per ton	13	0	0
* Sulphate, white lump "	3	15	0
* Crushed "	3	17	6
AMMONIA—			
Carbonate per lb.	0	0	3
Muriate, white, large grain per cwt.	1	8	0
" " small grain "	1	3	0
Sal ammoniac, first white "	1	13	0
Sulphate (Leith, Hull, or Liverpool) per ton	10	2	6
" (Beckton) "	10	5	0
ANILINE—Oil and salt per lb.	0	0	5½
ANTHRACENE—"A" grade per unit	0	0	5½
BARIUM—			
* Carbonate, precipitated per ton	8	15	0
* Chloride, calcined "	6	0	0
* Sulphide "	4	15	0
* Sulphate (blanc fixe) "	7	0	0
CALCIUM—Chloride "	2	5	0
COLOURS—			
Ochre (according to quality) per ton 45s. to	3	0	0
" French, J. C. " 60s. to	3	5	0
Red lead per ton	15	5	0
White lead "	17	10	0
Paint "	18	15	0
Pure ivory black per cwt.	0	12	0
Mineral black per cwt. 3s. 6d. to	0	4	0
Lamp black (according to quality) per cwt. 5s. to	0	7	6
Umber, Devonshire per cwt.	2	7	6
" Turkish "	2	0	0
Ultramarine (pure) per cwt. 35s. to	2	5	0
Zinc oxide per ton	23	0	0
Oxide of iron, finest "	20	0	0
" medium "	10	10	0
" common "	6	17	6
COPPER—Sulphate (Anchor) per ton	17	10	0
CREOSOTE OIL—Filtered per gall.	0	0	3
IRON SULPHATE—Green copperas, Lancs. per ton	2	0	0
LEAD—			
Acetate, white "	23	5	0
MAGNESIUM—			
Carbonate per cwt.	1	18	9
Sulphate (Epsom salts) per ton	2	17	6
NAPHTHA—			
Coal-tar, crude, 30 per cent., at 120° C. per gall.	0	0	9½
" solvent, 90 per cent., at 160° C. "	0	1	7
" 95 per cent., at 166° C. "	0	1	10
Wood, miscible, 60 o.p. "	0	3	9
" solvent "	0	3	0
PEARL HARDENING per ton	3	0	0
PHOSPHORUS—Sticks per lb.	0	2	1
PITCH per ton	0	18	6
SODIUM—			
Aluminate per cwt.	2	0	0
Bichromate, English and Scotch delivery per lb.	0	0	3½
† Bicarbonate per ton	6	5	0
Peroxide per lb. 1s. 9d. to	0	2	0
Carbonate, caustic soda ash per ton	4	5	0
Soda crystals "	2	17	6
Chlorate per lb.	0	0	4½
* Hyposulphite per ton	5	0	0
Nitrate, refined per cwt.	0	7	6
Phosphate per ton	12	0	0
* Silicate, 75° Tw. "	2	12	6
Sulphate, saltcake "	0	19	0
SULPHOCYANIDE OF AMMONIUM per lb.	0	0	5½
SULPHUR—			
Recovered per ton	5	0	0
Roll "	6	5	0
Flower "	7	12	6
TAR—Refined per barrel	0	9	6
TIN CRYSTALS per lb.	0	0	4½
TOUOL—Pure per gal.	0	1	9
TURPENTINE—American spirits per cwt.	1	4	6
ZINC—Sulphate per ton	5	15	0

* Denotes f.o.b. Tyne. † f.o.b. Liverpool.

Apparatus.

A SIMPLE FUNNEL-SUPPORT.

THIS is a French idea (fig. 1). The clip B is put on a pot, a piece of paper, *f*, of suitable thickness being interposed to make the grip of the clip secure. The end *b* is mortised, as shown, and into this the tongue *a*, cut at the end of a second clip, A, fits. The pot can be weighted with water or sand.

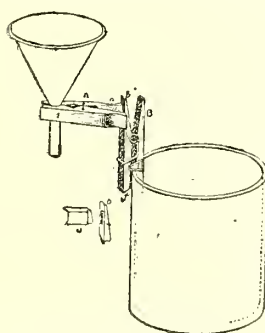


FIG 1.

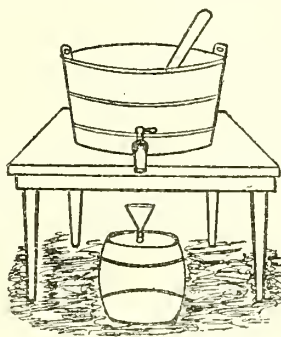


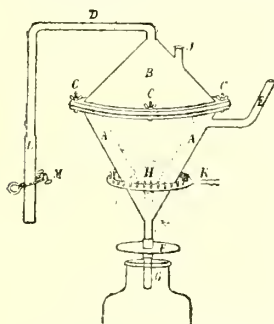
FIG 2.

SYRUP-MAKING.

Mr. C. A. Cook recommends a wash-tub with small faucet inserted for making simple syrup (fig. 2). Put the sugar and distilled water in the tub, and stir briskly with a ladle. The sugar soon dissolves. Mr. Cook adds formaldehyde 10 drops to the gallon.

RAPID FILTER.

Subjoined is an outline drawing of a filter patented by Mr. Funck, apotheker, Radebeul, for facilitating the filtration of syrups, oils, and other viscous liquids. It consists of a double-funnel, A. The stem of the inner funnel H has a flange, F, placed upon it to exclude air from the filtrate-vessel C, and this can be arranged in such a way as to ensure the exclusion of micro-organisms as well. The tube E proceeding from A is to permit the inner space being partially filled with glycerine or liquid paraffin, kept hot by means of the gas-ring K. The hood B is clamped to the funnel

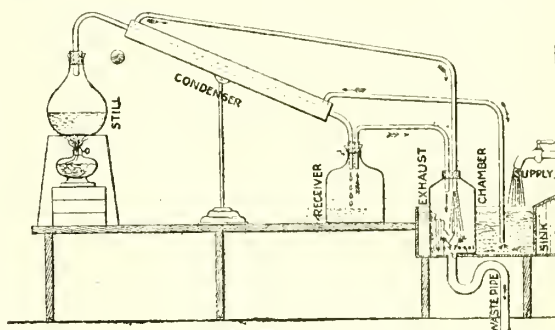


by the screws C. The tube J is for admission of the liquid to be filtered, while the tube D L is for regulating the pressure of air and steam by means of the clip M. In the inner funnel a small filtering-cone, H, is placed, and a filter of paper or flannel supported in it.

A HOME-MADE VACUUM-STILL.

The following suggestion by Mr. H. de Allgeo illustrates well the principle of the filter-pump, and how it can be applied to make a vacuum-apparatus. To make the thing take a 1-gallon tin can, cut a round hole about 2 inches in diameter in the bottom, place this over the waste-pipe in the sink, and make airtight connections by means of a rubber washer; drive a nail three or four times through the sides of the can near the bottom. These holes supply the necessary water to maintain the action of the pump when once started, and, by a little experimenting may be regulated to suit each case always remembering that the minimum quantity of water gives the maximum amount of suction. Finally connect the top airtight to the receiver. To operate, place the can in position, hold it down, and turn on the water; when the sink is nearly full, tilt the can slightly so as to allow the waste-pipe to fill; then allow the can to settle down on the washer. The pump is now in full operation. In the

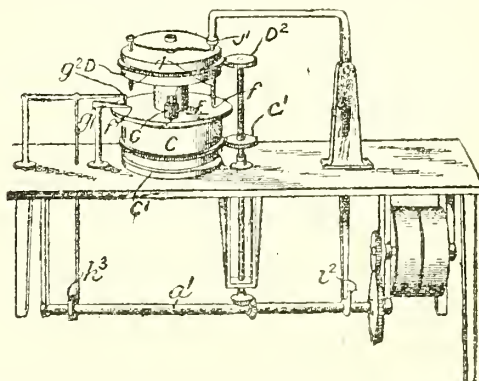
illustration below the connections are shown for vacuum-distilling. If used for filtering, the stem of the funnel is



put in the receiver, and the water-tube of the exhaust chamber is closed.—*Western Druggist*.

PILL AND TABLET COATING MACHINE.

A British patent has recently been obtained for a machine for coating pills or tablets with sugar or other material by compression. Mr. P. J. Noyes, of Lancaster, New Hampshire, U.S.A., is the inventor. It consists of two drums C and D which rotate by suitable gearing from the shaft *a*¹, and an intermediate disc F carried by the lower drum C and furnished with one or more mould openings *f*. Each of the drums is fitted with one or more vertically



movable dies I, of which those in the lower drum are raised and lowered by a cam plate *c*¹, while those in the upper drum are depressed at the proper moment by a hammer *x*¹ actuated by a cam *i*² on the shaft *a*¹. The pills or tablets are fed from a shoot *g*¹ by a finger *g*² actuated by an eccentric *h*³ on the shaft *a*¹. The coating-material is contained in fixed hoppers *g*, from which it is discharged into the openings *f* as they pass underneath. Each opening receives two charges of coating-material, one before and one after the entry of the pill or tablet. The gear-wheels *e*¹ and *D*² are mutilated, as shown, so as to interrupt the movement of the drums during the feeding of the pill and the descent of the compressing-die.

ENTER Boy: "Please, bottle of sheep-wash." "Sheep-wash! What is it for?" A pause. "It isn't sheep-wash; it's French wash." "French wash?" "Yes; it's for neuralgia." "How do you use it?" "Rub it on." "Is it menthol you want?" "Yes; that's it—a bottle of menthol." Five minutes afterwards boy is back again. "It's Dutch drops I want."

AN OLD HAIR RESTORER.—Prof. Macalister, of Cambridge, has recently deciphered a papyrus prescription for a hair-wash that was given to the mother of King Chata (first Egyptian dynasty). The prescription is at least 6,000 years old. Dogs' toes, dates, and asses' hoofs were amongst the ingredients, the whole being boiled in water, and the decoction applied to the head.



In writing letters for publication correspondents should adopt a concise, but not abbreviated, style. They are requested to write on one side of the paper only. Letters, with or without a nom-de-plume, must be authenticated by the name and address of the writer. Queries should be written on separate pieces of paper, and the regulations printed under the sections to which they apply should be strictly observed.

The Pharmacy Bill Controversy.

SIR,—In your report of the meeting of chemists and pharmacists held in Manchester last week, you conclude by stating that "only nine voted against" the proposed Bill. As this could be misconstrued, might I explain that, considering those who could not be present when the votes were counted, but who made their opinions known either by letter or orally during the first part of the evening, the majority were opposed to the Bill?

Your editorial remarks as to the value of a proposed "Fellowship" are endorsed by many avowed opponents of the Bill, who, whilst objecting to be deprived of their own privileges, yet do not desire any pseudo titles—or, indeed, anything else which they have not earned.

Manchester, Jan. 24. F. PILKINGTON SARGEANT.

SIR,—I have heard that "Some men are born great, others acquire greatness, and others have it thrust upon them."

Judging from your "leader" last week, you seem to have placed in the last category the members of the North Staffordshire Chemists' Association. As one of the above, am surprised at the attitude which you are taking in the matter of the new Pharmacy Bill, the principle of which latter is, so far as I can see, that "taxation and representation shall go together" for the common good.

As to our Major friends, I rather think "Esquire" a nice title: if they prefer a more homely one, why grumble?

W. B. ALLISON.

North Staffordshire Infirmary, January 25.

An Idea for a Pharmacy Club.

SIR,—It occurs to me that an educational means which has not been tried, as far as I know, in connection with pharmacy in Ireland, that might be useful to post-graduates, owing to the scattered residences of our licentiates, would be "clubs," either circulating or local, for the study or preservation of knowledge gained in special subjects. I have long thought that a club for the reading of Latin (classical), a knowledge of which we all obtain at the commencement of our career, but is probably lost to most of us from want of use, would be advantageous. The systematic reading of even one passage in the month would be an effective way of keeping up a knowledge of rules, grammar, and dictionary. Clubs for chemical science, botany and microscope work would help in the same way, and afford opportunities for those who had a special desire to work up either subject in association. I would be glad to hear from any licentiates of the Ph.S.I. who would be disposed to join in any such club. Each club should work independently of each other and of the Society.

I am, yours truly,

ROBERT J. DOWNES,

67 Lower Mount Street, Dublin.

President.

About Some Alleged Apothecaries.

SIR,—Some years ago certain apothecaries turned their businesses into limited-liability companies, and described themselves as X, Y & Co. (Limited), apothecaries.

The original directors were apothecaries, and no objection seems to have been made to the assumption of the title by the company. Since, however, the original apothecaries have died, and been replaced by gentlemen not holding that qualification.

For an unqualified man to style himself an apothecary is undoubtedly an offence against the Medical Acts, and it cannot be contended that a company, if the directors at least could not be so designated, has any right to do so.

It is therefore, I submit, an illegal proceeding for such companies to style themselves apothecaries, and I respectfully suggest the attention of the Apothecaries' Company to the matter.

There are in England and Scotland certain trading firms who describe themselves as "Apothecaries' Companies," but this is only a case of a trade name, and is probably on a different footing from the assumption of an unwarranted title.

Yours truly,

Dublin, January 22.

L.A.H.I. (74/67.)

[We are not quite sure that it is illegal for a company to describe itself as an apothecary, surgeon, physician, or what not. The penal section of the Medical Act 1858 (40) corresponds exactly with that of the Pharmacy Act, and sauce for the one should be sauce for the other too. If some enterprising draper or grocer would adopt the style, and prove it to be legal, he would do chemists a great service, for the company difficulty would soon be rectified.—ED. C. & D.]

Preservation of Ergot.

SIR,—The note on page 118 of your last issue on the varnishing of ergot to preserve it recalls a far more simple, yet sufficiently effective, plan. Before the British Pharmaceutical Conference at Aberdeen, in 1885, I read a note describing an experiment which was carried out originally at the suggestion of that veteran pharmacist, T. B. Groves. Ergot was crushed to a coarse powder, then put into a hydraulic press, and as much as possible of the oil squeezed out. The cake that was left resembled a piece of linseed cake—as hard and dry as a board is. It was wrapped in paper in the ordinary way, and left on a shelf for seven years. No weevil got his tooth into it, and some liquid extract prepared therefrom was employed in several cases and found to be as effective as the same preparation from fresh sound ergot. The plan described was not so fortunate as to secure the approval and support of Professor Kobert, whose authority on ergot is so justly worthy of respect. Why, I don't know; but I hold, nevertheless, that an affirmative experiment of this nature is more valuable than any number of failures, as showing that ergot can be preserved under very ordinary conditions if pressed into a cake and the oil squeezed out.

Yours faithfully,

Galen Works, S.E., January 22.

JOHN MOSS.

DISPENSING NOTES.

This section is intended for the elucidation of dispensing difficulties. Subscribers and their employes may contribute to it, criticising any of the following notes or contributing notes on prescriptions which they have found to be of unusual interest.

A Blaud's Pill-mass.

SIR,—Please say the proper excipient for the following pills:—

Ferri sulph. ...	...	...	...	gr. ij.
Potass. carb. ...	...	...	...	gr. ij.
Ext. nuc. vom. ...	...	...	...	gr. ʒ
Ext. gentian. ...	...	...	...	q.s.
Ft. pil. Mitte 48.				

And oblige

W. H. C. (74/43.)

[Rub up the extract of nux vomica with a little of the sulphate, add the rest and the carbonate, then pulv. traga-canth. gr. iv. and pulv. sacch. alb. gr. vj., and beat into a mass quickly.]

63/25. *Nocturne*.—Liq. hydrarg. perchlor. and potass. ioidid. form together one of the most effectual alkaloid-precipitants known. Hence the strychnine is thrown down. The doctor's attention should be called to the prescription, which is dangerous.

LEGAL QUERIES.

We do not give legal opinions by post. Information regarding most legal matters in connection with pharmacy will be found in THE CHEMISTS' AND DRUGGISTS' DIARY, and in "Pharmacy and Poison Laws of the United Kingdom," and Alpe's "Handy-book of Medicine-stamp Duty."

75/60. *Aloes*.—If you have passed an examination equivalent to the present pharmaceutical Preliminary you will not have to pass the new one nor any part of it before going for your Minor, even if you do not present yourself for the latter before the new Preliminary regulations come into force.

75/24. *Camphora*.—A trade-mark registered in a certain class covers all the articles which are grouped in that class, though a special arrangement between firms whose products do not elash is sometimes made.

72/9. *Mac*.—Midwives must sign the poison-register when they buy ergot or corrosive sublimate. You are quite right to insist on this.

71/1. *Chilblain*.—Your "chilblain-cure" would probably be liable to duty in any case. It certainly is with your name and the aostrophe preceding the title. If you called it simply "chilblain-ointment" it would not be liable.

69/23. *J. C.*—If you sell a composition-essence which is liable to stamp-duty it would not be safe to sell another composition-essence unstamped unless it was quite clear that the articles were quite distinct. See correspondence, *C. & D.*, February 15, 1886.

61/16. *George*.—You may store acetylene gas, but must not keep it under pressure, or in liquid form, unless you have a licence under the Explosives Act. The generators sold are so constructed that only enough gas is generated at a time from the calcium carbide to fill the reservoir. If you have more than five 1-lb. tins of calcium carbide on your premises at a time a licence under the Petroleum Act is needed.

MISCELLANEOUS INQUIRIES.

We reply to our subscribers and their employés only; queries must, therefore, be authenticated by the name and address of the subscriber. When more than one query is sent write each on a separate piece of paper. When a sample accompanies a query full particulars regarding the origin and use of the sample must be given, and the name of the querist should be placed on the sample. Queries are not replied to by post.

68/12. *R. R. S.*—We do not know what the Esquimaux use to keep off mosquitoes, but from your description we should be inclined to recommend a softened form of ung. pici, B.P.

68/18. *J. R.*—(1) The hair-dye is a good one. (2) Cocoa-nut-oil soap is best for linen-glosses. (3) Linen-gloss made of soap and French chalk keeps all right in packets.

68/25. *Gladius*.—You cannot make a 4-per-cent. aqueous solution of creosote. The solubility of creosote in water is only about 1 in 300.

68/32. *Dull Black*.—*Hat-varnish*.—See *C. & D.*, Aug. 23, 1897, page 391. This, a correspondent tells us, yields a dull lacquer.

67/72. *Plaster*.—(1) If the right proportions of water and plaster of Paris are used in making plaster-casts, water does not separate. A thin cream is first run all over the mould, removing air-bubbles with a camel-hair brush, and after this is done a thicker plaster is run in. (2) Plaster-casts are hardened by coating with hot and saturated solutions of either alum or borax. Two or three applications will be needed.

44/7. *Cerea* (Turin).—*Peroxide of Hydrogen* is generally made by adding moist hydrated barium hydrate to dilute sulphuric acid, filtering out the sulphate of barium, neutralising the liquid with baryta-water, and again filtering.

64/66. *T. B.*—For a *Female Mixture*, equal parts of mist ferri and dec. aloes, given in ounce doses, is quite safe. Parts of your letter are illegible from smearing in copying.

62/16. *S. J.*—Will you please say what curling-fluids you have found unsatisfactory? We may then furnish other formulæ than what you have tried.

72/33. *Delta*.—*Eau de Quinine* is best coloured by Brazil wood or cudbear.

69/29. *L. S. D.*—The hydrochlorate of quinine is used in the suppositories you mention.

65/33. *Ajax*.—The dose of eucalyptus oil for a canary suffering from asthma is 2 or 3 drops.

65/62. *A. P. S.*—You will find all the information as to becoming a dentist in the Educational number of *C. & D.*, September 4, 1897, page 418.

73/21. *Mizpah*.—Solution of cyanide of potassium will clean badly-tarnished silver and electroplate.

68/53. *West Indian* (Jamaica).—A seltzogene or "Spark-lets" are what you require for making small quantities of aerated water.

67/52. *Cephalicus*.—Eight grains of phenacetin makes one of the simplest and best *Headache-powders*. Being a pure drug it does not require stamping. [You ask us "not to refer back, as I do not have my *C. & D.* bound." But you must remember that other subscribers do, and it would be hardly fair to them if we were to be frequently reprinting the same items. Besides, you can always get a back number from the Publisher for 4d.]

72/24. *Cork*.—*Ph.D.*—A pharmacist desiring this degree should certainly go to Marburg University, where the training can be confined almost strictly to pharmaceutical lines. The Matriculation examination of the London University always exempts from the Entrance examination, so does the similar examination of any British University. The pharmaceutical Preliminary is useless for this purpose. Two years is the usual time taken for the Ph.D. As the lectures and instruction are given in German "a smattering" of that language is likely to benefit you as much as "a smattering" of English would benefit a German attending, say, Queen's College, Galway. The fees in German Universities are comparatively low—20% to 35% a year will cover all the classes and laboratory-instruction. The subjects for Ph.D. are much the same as for a British B.Sc., and vary according to the department which the graduate desires to profess. Living in Germany is a trifle lower than in Great Britain, but it is unwise to reckon the expense on this score at less, because an Englishman in a foreign country always wants to satisfy some insular longing which costs money.

215/27. *F. D.* (Tours).—There is at present no indication of an immediate advance in cubebs, the supplies in London being abundant. There was some talk in Amsterdam, a month ago, about a rise, but that did not come off.

67/2. *D. J.*—(1) For *Diphtheritic Roup* in poultry give a paste composed of equal parts of powdered anise and golden sulphuret of antimony massed with copoba. (2) Upcott Gill publishes books on poultry, which you may use as a supplement to "Veterinary Counter Practice." (3) It is rarely advantageous to take more than 5 minims of liq. arsenic, three times a day. See the note elsewhere in this issue. (4) Well, why not? We do not object; but you are mistaken in supposing that only mercuric chloride is formed in the ringworm-lotion.

66/58. *Colehicum*.—Try Messrs. F. Boehm & Co. for the hard ozokerite which you mention. Messrs. J & J. Field are makers of the black ozokerite heel-ball.

INFORMATION SUPPLIED.

Subjoined are notes and formulæ received from subscribers. Similar information is always welcome.

16/11. *Lignum* says that sphygmographic varnish consists of gum benzoin dissolved in spirit.

Liniment for Neuralgia and Rheumatism:—

Chloroform,
Oil of turpentine,
Spirit of wine,
Camphor p. eq.

Rub the part affected two or three times a day.

This is very good.

PENDENNIS.

INFORMATION WANTED.

The Editor will be obliged for replies to the following from any who can furnish the information

- 74/62. Makers of "Pontes Pine-tar" pessaries.
- 75/69. Makers of x-ray oil for lamps.
- 69/60. Makers of tetrachloride of carbon.
- 76/66. London agents for Zatol.

Coming Events.

We insert notices of association and society meetings in this section free if they are sent to us, on postcards, by the Wednesday of the week before the meetings are to be held.

Monday, January 31.

Pharmaceutical Society of Ireland, 67 Lower Mount Street Dublin. Evening meeting at 8 P.M. Lecture by Mr. G. H. Carpenter, B.Sc., on "Insects: and How to Catch, Preserve, and Classify them."

Tuesday, February 1.

Bradford and District Chemists' Association, at Great Northern Victoria Hotel, at 9 P.M. Lecture by Mr. T. H. Pattinson.

Wednesday, February 2.

Nottingham and Notts Chemists' Association, at East Circus Street Hall. Lantern-lecture, "From Mont Blanc to the Matterhorn." By Mr. Howie. Supper at the Albert Hall at 10 P.M.

Society of Arts, John Street, Adelphi, W.C., at 8 P.M. "The Cinematograph." By Jules Fuerst. Captain W. De W. Abney, C.B., F.R.S., will preside.

Thursday, February 3.

Midland Pharmaceutical Association. Meeting at Mason College, 8.30 P.M. "Dispensing Difficulties." By members.

Chemists' Assistants' Association. Cinderella dance at Portman Rooms, at 7.30 P.M.

Chemical Society, Burlington House, Piccadilly, at 8 P.M. The following papers will be read: "On the Dissociation of Potassium Platinichloride in Dilute Solution, and the Production of Platinum Monochloride," by E. Sonstadt; "Effect of the Mono-, Di-, and Tri-chloroacetyl Groups on the Rotatory Power of Methyl and Ethyl Glycerates and Tartrates," by Percy Frankland, F.R.S., and Thomas Stewart Patterson, Ph.D.; "The Rotation of Ethyl and Methyl Di-monochloroacetyl-tartrates," by Percy Frankland, F.R.S., and Andrew Turnbull, Ph.D.; "The Volumetric Estimation of Sodium," by H. J. H. Fenton, M.A.

Friday, February 4.

Aberdeen Junior Chemists' Association, 21 Bridge Street, at 9.30 P.M. "A Matter of Life." By Mr. Chas. Forbes.

Sheffield Microscopical Society, Rutland Institute, at 8 P.M. "Photo-Micrography as applied to the Study of Diatoms." By Mr. J. Newton Coombe.

Irish Pharmacists' Assistants' Association, Dublin, in the Pharmaceutical Society's Rooms, 67 Lower Mount Street. "Pharmaceutical Ethics." By Mr. W. F. Wells, jun.

Business Changes.

MR. C. WHITCOMBE, chemist, Petworth, has taken Mr. Frank Rogers into partnership.

MESSRS. GOLDTHORPE & COOK, chemists and druggists, have opened a branch at 68 High Street, Chatham.

MR. COLIN M. BARNES has purchased the business of Mr. Peter Hall, 3 Victoria Buildings, Heaton Road, Newcastle-on-Tyne.

THE wine-licence held by Mr. E. Pratt, chemist and druggist, High Cross, Barnstaple, was on January 20 transferred to Mr. George Lee, his successor.

MR. JOHN ANLEY, formerly of Library Place, and then of New Street, St. Helier, Jersey, has re-opened in King Street, the principal business thoroughfare of "Cæsarea's" capital town.

MR. JOHN TAYLOR has transferred his interest in the business of John Taylor & Son, druggists 38 Market Place, Newark-on-Trent, to his son Mr. William John Taylor, who will carry it on under the old style.

MR. BARNARD S. PROCTOR, F.I.C., has retired from the firm of Proctor, Son & Clague, pharmaceutical chemists, of 11 Grey Street, 5 Saville Row, and Holly Avenue West, Jesmond, Newcastle-on-Tyne, as from January 1 last.

The business will in future be carried on by Mr. T. Maltby Clague, pharmaceutical chemist, solely. Mr. Proctor is a unique figure in English pharmacy. He has not been an unfrequent contributor to pharmaceutical literature, and yet we all think his appearances have been far too rare. On scientific pharmacy Mr. Proctor is a leading authority. He is the only man, we believe, in this country who has ever occupied a university chair of pharmacy. The experiment made by the University of Durham some thirty years ago did not turn out a success at the moment, but it yielded the very original "Lectures on Pharmacy" which Mr. Proctor subsequently published, and which have passed through three editions, and, perhaps more indirectly, the extremely useful "Manual of Pharmaceutical Testing," published by ourselves some five years ago, a new edition of which we are hoping to produce when the new British Pharmacopœia is available. In his scientific papers Mr. Proctor is always becomingly serious. But in his more trade criticisms he has manifested a vein of rich humour which reached its culminating-point in the paper on "Pharmaceutical Remuneration in Relation to Pharmaceutical Progress" which was declined by the Executive Committee of the British Pharmaceutical Conference in 1881, but which was read by tenfold more chemists than read the accepted papers, and with at least ten times the enjoyment. "The pharmacist," said Mr. Proctor in that paper, "is like a jackal. He catches prey which promises nice little pickings, but the omnivorous grocer, like a roaring lion, pounces upon the repast and devours prey, pickings, and jackal." We must eat our neighbours or they will eat us. This, he pointed out, was the law of nature as it affected pharmacists then. And he concluded his paper by the statement "that he is a benefactor to his kind who can make one pharmacist grow where two grew before." Mr. Proctor's latest paper was one published in this journal in January last on the assay of opium.

